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SITE IMPROVEMENT ESTIMATES
WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
J. L. HAYDEN ASSOCIATES, INC.
BOSTON, MASSACHUSETTS
MARCH 1963

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENTS REPORT:

HIGH SERVICE
WATER SYSTEM

CODE NO. R-224 (5)

Reference is made to the following drawings, which accompany this report:

High Service Water System WP-403-1 thru 7

Water mains for all services (Low, High Service and High Pressure Fire) have been standardized by the Water Division, Boston Public Works Department and are from 8-inch to 16-inch inclusive, cast iron, cement lined, tar coated water mains conforming to Federal Specifications WW-P-421, Type II, Class 250. Fittings are Class D, conforming to American Water Works Association Standards. Pipe has a normal laying length of at least 16 feet.

This standarization allows the Water Division flexibility in their operations as any system can be converted or consolidated with another system without costly replacement of pipe or fittings.

Unit costs for the High Service Water System were developed from information supplied by the Water Division and current unit costs of water installation in the immediate area of Washington Park.

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "A" - HIGH SERVICE WATER

CODE NO. R-224(5)

<u>INTERIOR STREETS</u>	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Abbotsford ("B"-1)	10,900	100	10,900
Alpine ("B"-2 thru 3)	10,400	100	10,400
Brookledge ("B"-4)	20,400	100	20,400
Brunswick ("B"-5)	4,700	100	4,700
Cardington ("B"-6)	4,800	100	4,800
Circuit ("B"-7)	7,000	100	7,000
Cobden ("B"-8)	250	100	250
Crawford ("B"-9 thru 12)	18,600	100	18,600
Dunford ("B"-13)	4,400	100	4,400
Elm Hill Avenue ("B"-14 thru 16)	8,400	100	8,400
Elmore ("B"-17 thru 19)	14,600	100	14,600
Fenner ("B"-20)	4,100	100	4,100
Fountain ("B"-21)	250	100	250
Galena ("B"-22)	5,600	100	5,600
Harold ("B"-23 thru 28)	18,350	100	18,350
Hartwell ("B"-29 thru 30)	11,700	100	11,700

<u>INTERIOR STREETS</u>	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Hazelwood ("B"-31)	6,200	100	6,200
Hewes ("B"-32)	2,300	100	2,300
Howland ("B"-33)	12,500	100	12,500
Humboldt Avenue ("B"-34 thru 37)	11,600	100	11,600
Hutchings ("B"-38)	6,800	100	6,800
Maple ("B"-39 thru 40)	3,800	100	3,800
Mayfair ("B"-41)	6,800	100	6,800
Nazing ("B"-42)	12,700	100	12,700
Paulding ("B"-43)	250	100	250
Regent ("B"-44)	250	100	250
Rock ("B"-45)	3,400	100	3,400
Ruthven ("B"-46 thru 47)	22,700	100	22,700
Schuyler ("B"-48 thru 50)	21,400	100	21,400
Sherman ("B"-51)	7,600	100	7,600
St. James ("B"-52 thru 53)	17,200	100	17,200
Townsend ("B"-54 thru 59)	79,200	100	79,200
Wakullah ("B"-60)	8,000	100	8,000
Walnut Avenue ("B"-61 thru 70)	29,900	100	29,900
Wardman Road ("B"-71)	5,900	100	5,900
Waumbeck ("B"-72)	8,000	100	8,000
Wayne ("B"-73)	7,000	100	7,000
Wenonah ("B"-74)	38,100	100	38,100
Road "A" ("B"-75 thru 81)	107,200	100	107,200

<u>INTERIOR STREETS</u>	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Road "B" ("B"-82)	5,400	100	5,400
Road "C" ("C"-83)	3,200	100	3,200
Road "D" ("B"-84 thru 85)	8,700	100	8,700
Road "E" ("C"-86)	4,700	100	4,700
Road "F" ("B"-87)	5,100	100	5,100
Road "G" ("B"-88)	5,400	100	5,400
Road "H" ("B"-89)	3,900	100	3,900
Road "J" ("B"-90)	7,100	100	7,100
Road "L" ("B"-90A)	24,800	100	24,800
Road "M" ("B"-90B)	19,400	100	19,400
Road "N" ("B"-90C)	<u>21,200</u>	100	<u>21,200</u>
SUBTOTAL	672,150		672,150

BOUNDARY STREETS

Dudley ("B"-91)	900	50	450
Warren ("B"-92 thru 98)	72,000	50	36,000
Washington ("B"-99 thru 100)	<u>4,800</u>	50	<u>2,400</u>
SUBTOTAL	77,700		38,850
GRAND TOTAL	749,850		711,000

APPLICATION FOR LOAN AND GRANT
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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ABBOTSFORD STREET

From Walnut to Harold (WP403-5 & 6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	640	11.00	7,040
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	19	50.00	<u>950</u>
				9,040
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,900</u>
				10,940

USE \$10,900

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ALPINE STREET

From Alpine to Akron (WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	220	11.00	2,420
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	8	50.00	<u>400</u>
				3,870
Contingencies, Unit Cost Increase, Engineering - 21%				<u>810</u>
				4,680

USE \$4,700

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ALPINE STREET

From Akron to St. James (403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	320	11.00	3,520
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	6	50.00	<u>300</u>
				4,670
Contingencies, Unit Cost Increase, Engineering - 21%				<u>980</u>
				5,650

USE \$5,700

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

BROOKLEDGE STREET

From Humboldt to Elm Hill (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	1180	11.00	12,980
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	3	150.00	450
Hydrant	EA	3	400.00	1,200
6" Hydrant Connector	LF	30	10.00	300
House Service Transfer	EA	30	50.00	<u>1,500</u>
				16,830
Contingencies, Unit Cost Increase, Engineering -n21%				<u>3,530</u>
				20,360

USE \$20,400

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

BRUNSWICK STREET

From Warren to End (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	250	11.00	2,750
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	6	50.00	<u>300</u>
				3,900
Contingencies, Unit Cost Increase, Engineering - 21%				<u>820</u>
				4,720

USE \$4,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

CARDINGTON STREET

From Cobden to Fenner (WP403-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined) In Place	LF	250	11.00	2,750
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	7	50.00	<u>350</u>
				3,950

Contingencies, Unit Cost Increase, Engineering - 21% 830

4,780

USE \$4,800

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CIRCUIT STREET

From Regent to Walnut (WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" C.I.(Cement Lined)In place	LF	110	15.00	1,650
12" Gate and Gate Box	EA	1	300.00	300
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
Clean and Line 12" C.I.Pipe	LF	260	8.00	2,080
Cap Abandoned Branches	EA	3	200.00	600
6" Hydrant Connector	LF	10	10.00	100
Rock Excavation	CY	40	12.00	<u>480</u>
				5,760
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,210</u>
				6,970

USE \$7,000

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

COBDEN STREET

At Rochdale (WP403-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Abandoned Branches	EA	1	200	200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>40</u>
				240

USE \$250

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CRAWFORD STREET

From Humboldt to Harold (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	670	8.00	5,360
Temporary 4" Main and Services	LF	670	1.50	<u>1,000</u>
				6,360
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,336</u>
				7,696

USE \$7,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE REPORT R-224(5)

CRAWFORD STREET

From Harold to Waumbeck (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	SY	490	8.00	3,920
Recondition 12" Gate	EA	1	150.00	150
Temporary 2" Main and Services	LF	490	.75	<u>370</u>
				4,440
Contingencies, Unit Cost Increase, Engineering - 21%				<u>930</u>
				5,370

USE \$5,400

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" -- HIGH SERVICE WATER COSTS BY STREETS

CRAWFORD STREET

From Waumbeck to Hollander (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	250	8.00	2,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>420</u>
				2,420

USE \$2,400

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

CRAWFORD STREET

From Hollander to Holworthy (WP403-4 & 6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	250	8.00	2,000
Recondition 12" Gate	EA	1	150.00	150
Temporary 2" Main & Service	LF	250	.75	<u>190</u>
				2,340
Contingencies, Unit Cost Increase, Engineering - 21%				<u>490</u>
				2,830

USE \$2,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

DUNFORD STREET

From Cobden to Fenner (WP403-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined In Place	LF	230	11.00	2,530
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	5	50.00	<u>250</u>
				3,630
Contingencies, Unit Cost Increase, Engineering - 21%				<u>760</u>
				4,390

USE \$4,400

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ELM HILL AVENUE

From Crawford to Howland (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	300	8.00	2,400
Recondition 12" Gate	EA	1	150.00	<u>150</u>
				2,550
Contingencies, Unit Cost Increase, Engineering - 21%				<u>540</u>
				3,090

USE \$3,100

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ELM HILL AVENUE

From Howland to Wenonah (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	250	8.00	2,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>420</u>
				2,420

USE \$2,500

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ELM HILL AVENUE

From Wenonah to Warren (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	270	8.00	2,160
Recondition 12" Gate	EA	1	150.00	<u>150</u>
				2,310
Contingencies, Unit Cost Increase, Engineering - 21%				<u>490</u>
				2,800

USE \$2,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ELMORE STREET

From Galena to Kensington (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	210	11.00	2,310
House Service Transfer	EA	8	50.00	<u>400</u>
				2,710
Contingencies, Unit Cost Increase, Engineering - 21%				<u>570</u>
				3,280

USE \$3,300

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ELMORE STREET

From Kensington to Mayfair (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	250	11.00	2,750
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	4	50.00	<u>200</u>
				3,600
Contingencies, Unit Cost Increase, Engineering - 21%				<u>760</u>
				4,360
				USE \$4,400

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ELMORE STREET

From Mayfair to Walnut (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" C.I. (Cement Lined) In Place	LF	300	15.00	4,500
12" Gate and Gate Box	EA	1	300.00	300
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	5	50.00	<u>250</u>
				5,700
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,200</u>
				6,900

USE \$6,900

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

FENNER STREET

From Dunford to Cardington (WP403-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	210	11.00	2,310
Rock Excavation	CY	90	12.00	<u>1,080</u>
				3,390
Contingencies, Unit Cost Increase, Engineering - 21%				<u>710</u>
				4,100

USE \$4,100

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

FOUNTAIN STREET

From Circuit to Regent (WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Existing Main	EA	1	200	<u>200</u>
				200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>40</u>
				240

USE \$250

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

GALENA STREET

From Elmore to Road D (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	300	11.00	3,300
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	5	50.00	<u>250</u>
				4,600
Contingencies, Unit Cost Increase, Engineering - 21%				<u>970</u>
				5,570

USE \$5,600

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HAROLD STREET

From Abbotsford to Crawford (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	100	11.00	1,100
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	<u>100</u>
				1,950
Contingencies, Unit Cost Increase, Engineering - 21%				<u>410</u>
				2,360

USE \$2,400

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HAROLD STREET

At Howland (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Abandoned Branch	EA	1	200	200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>40</u>
				240

USE \$250

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HAROLD STREET

From Seaver to Homestead (WP403-5 & 6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Abandoned Main	EA	3	200	600
Contingencies, Unit Cost Increase, Engineering - 21%				<u>120</u>
				720

USE \$750

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HAROLD STREET

From Holworthy to Hollander (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Abandoned Branches	EA	3	200	600
Contingencies, Unit Cost Increase, Engineering, - 21%				<u>130</u>
				730

USE \$750

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

HAROLD STREET

From Townsend to Munroe (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	370	11.00	4,070
8" Gate and Gate Box	EA	2	200.00	400
House Service Transfer	EA	14	50.00	<u>700</u>
				5,170
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,090</u>
				6,260
				<u>USE \$6,300</u>

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HAROLD STREET

From Munroe to Harold Park (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	450	11.00	4,950
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrants	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	15	50.00	<u>750</u>
				6,550
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,380</u>
				7,930

USE \$7,900

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HARTWELL STREET

From Schuyler to Cheney (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	360	11.00	3,960
8" Gate and Gate Box	EA	2	200.00	400
House Service Transfer	EA	8	50.00	<u>400</u>
				4,760
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,000</u>
				5,760

USE \$5,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

HARTWELL STREET

From Cheney to Georgia (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	350	11.00	3,850
8" Gate and Gate Box	EA	2	200.00	400
House Service Transfer	EA	12	50.00	<u>600</u>
				4,850
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,020</u>
				5,870

USE \$5,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

HAZELWOOD STREET

From Townsend to Munroe (WP403-4)

INTERIOR

ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
8" C.I.(Cement Lined)In Place	LF	410	11.00	4,510
8" Gate and Gate Box	EA	2	200.00	400
House Service Transfer	EA	5	50.00	<u>250</u>
				5,160
Contingencies, Unit Cost Increase,Engineering - 21%				<u>1,080</u>
				6,240

USE \$6,200

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HEWES STREET

From Regent to Rockland (WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	150	11.00	1,650
8" Gate and Gate Box	EA	1	200.00	<u>200</u>
				1,850
Contingencies, Unit Cost Increase, Engineering - 21%				<u>390</u>
				2,240

USE \$2,300

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HOWLAND STREET

From Elm Hill to Warren (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	730	11.00	8,030
8" Gate and Gate Box	EA	3	200.00	600
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	21	50.00	<u>1,050</u>
				10,330
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,170</u>
				12,500

USE \$12,500

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

HUMBOLDT AVENUE

From Holworthy to Hollander (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Abandoned Branches	EA	3	200.00	600
Contingencies, Unit Cost Increase, Engineering - 21%				<u>130</u>
				730

USE \$800

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HUMBOLDT AVENUE

From Townsend to Munroe (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	430	8.00	3,440
Cap Abandoned Branch	EA	1	200.00	<u>200</u>
				3,640
Contingencies, Unit Cost Increase, Engineering - 21%				<u>764</u>
				4,404
				<u>USE \$4,400</u>

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HUMBOLDT AVENUE

From Munroe to Road A (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I.Pipe	LF	280	8.00	2,240
Recondition 12" Gate	EA	1	150.00	150
Temporary 2" Main and Services	LF	280	.75	210
12" C.I.(Cement Lined)In Place	LF	80	11.00	<u>880</u>
				3,480
Contingencies, Unit Cost Increase, Engineering - 21%				<u>730</u>
				4,210

USE \$4,200

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HUMBOLDT AVENUE

From Road A to Road C (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	230	8.00	<u>1,840</u>
				1,840
Contingencies, Unit Cost Increase, Engineering - 21%				<u>390</u>
				2,230

USE \$2,200

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

HUTCHINGS STREET

From Humboldt to Road J (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	360	11.00	3,960
8" Gate and Gate Box	EA	3	200.00	600
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	8	50.00	<u>400</u>
				5,610
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,180</u>
				6,790

USE \$6,800

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

MAPLE STREET

From Seaver to Nazing (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I.Pipe	LF	150	8.00	1,200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>250</u>
				1,450

USE \$1,500

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

MAPLE STREET

From Nazing to Wayne (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I.Pipe	LF	220	8.00	1,760
Temporary 2" Main and Services	LF	220	.75	<u>160</u>
				1,920
Contingencies, Unit Cost Increase, Engineering - 21%				<u>400</u>
				2,320

USE \$2,300

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

MAYFAIR STREET

From Elmore to Road D (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	370	11.00	4,070
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	10	50.00	<u>500</u>
				5,620
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,180</u>
				6,800

USE \$6,800

CODE NO. R-224(5)

NAZING STREET

From Maple to Blue Hill Avenue (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	730	11.00	8,030
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	20	10.00	200
House Service Transfer	EA	16	50.00	<u>800</u>
				10,530
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,210</u>
				12,740
USE \$12,700				

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

PAULDING STREET

At New End of R.O.W. (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Existing Main	EA	1	200.00	200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>40</u>
				240

USE \$250

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

REGENT STREET

At Alpine (WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Existing Main	EA	1	200.00	200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>40</u>
				240

USE \$250

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ROCK STREET

From Regent to Rockland (WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	220	11.00	2,420
8" Gate and Gate Box	EA	2	200.00	<u>400</u>
				2,820
Contingencies, Unit Cost Increase, Engineering - 21%				<u>590</u>
				3,410
				<u>USE \$3,400</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

RUTHVEN STREET

From Walnut to Harold (WP403-5 & 6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	580	11.00	6,380
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	20	50.00	<u>1,000</u>
				8,430
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,770</u>
				10,200

USE \$10,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

RUTHVEN STREET

From Harold to Humboldt (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	690	11.00	7,590
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	20	10.00	200
House Service Transfer	EA	20	50.00	<u>1,000</u>
				10,290
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,160</u>
				12,450

USE \$12,500

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

SCHUYLER STREET

From Elm Hill to Maple (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	540	11.00	5,940
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	12	50.00	<u>600</u>
				7,590
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,590</u>
				9,180

USE \$9,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

SCHUYLER STREET

From Maple to Hartwell (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	250	11.00	2,750
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	6	50.00	<u>300</u>
				4,100
Contingencies, Unit Cost Increase, Engineering - 21%				<u>860</u>
				4,960

USE \$5,000

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

SCHUYLER STREET

From Hartwell to Blue Hill Avenue (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	390	11.00	4,290
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	12	50.00	<u>600</u>
				5,940
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,250</u>
				7,190

USE \$7,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

SHERMAN STREET

From Dale to Rockland (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	440	11.00	4,840
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	8	50.00	<u>400</u>
				6,290
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,320</u>
				7,610

USE \$7,600

CODE NO. R-224(5)

ST. JAMES STREET

From Washington to Alpine (WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	380	11.00	4,180
8" Gate and Gate Box	EA	2	200.00	400
House Service Transfer	EA	8	50.00	<u>400</u>
				4,980
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,050</u>
				6,030

USE \$6,000

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ST. JAMES STREET

From Alpine to Regent (WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	690	11.00	7,590
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	17	50.00	<u>850</u>
				9,290
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,950</u>
				11,240

USE \$11,200

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

TOWNSEND STREET

From Washington to Codman Park (WP403-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 16" C.I. Pipe	LF	210	9.00	1,890
Cap Abandoned Branch	EA	1	200.00	<u>200</u>
				2,090
Contingencies, Unit Cost Increase, Engineering - 21%				<u>440</u>
				2,530

USE \$2,500

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

TOWNSEND STREET

From Codman Park to Walnut Avenue (WP403-3 & 4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 16" C.I.Pipe	LF	900	9.00	8,100
Temporary 4" Main and Services	LF	900	1.50	1,350
Recondition 16" Gate	EA	1	150.00	150
Cap Abandoned Branch	EA	1	200.00	200
				<u>9,800</u>
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,060</u>
				11,860

USE \$11,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

TOWNSEND STREET

From Walnut to Harold (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
16" C.I. (Cement Lined) In Place	LF	400	19.00	7,600
16" Gate and Gate Box	EA	1	700.00	700
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	20	10.00	200
House Service Transfer	EA	7	50.00	<u>350</u>
				9,950
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,090</u>
				12,040

USE \$12,000

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

TOWNSEND STREET

From Harold to Humboldt Avenue (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
16" C.I.(Cement Lined)In Place	LF	870	19.00	16,530
16" Gate and Gate Box	EA	2	700.00	1,400
6" Gate and Gate Box	EA	3	150.00	450
Hydrant	EA	3	400.00	1,200
6" Hydrant Connector	LF	30	10.00	300
Cap Abandoned Branch	EA	1	200.00	200
House Service Transfer	EA	6	50.00	<u>300</u>
				20,380
Contingencies, Unit Cost Increase, Engineering - 21%				<u>4,280</u>
				24,660

USE \$24,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

TOWNSEND STREET

From Humboldt to Hazelwood (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
16" C.I. (Cement Lined) In Place	LF	400	19.00	7,600
16" Gate and Gate Box	EA	1	700.00	700
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	<u>100</u>
				8,950
Contingencies, Unit Price Increase, Engineering - 21%				<u>1,880</u>
				10,830

USE \$10,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STRLETS

TOWNSEND STREET

From Hazelwood to Warren (WP403--4 & 6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
16" C.I.(Cement Lined)In Place	LF	650	19.00	12,350
16" Gate and Gate Box	EA	1	700.00	700
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	20	10.00	200
House Service Transfer	EA	2	50.00	<u>100</u>
				14,450
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,030</u>
				17,480

USE \$17,500

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WAKULLAH STREET

From Dale to Rockland (WP403-2 & 4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	430	11.00	4,730
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	16	50.00	<u>800</u>
				6,580
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,380</u>
				7,960

USE \$8,000

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "F" - HIGH SERVICE WATER COSTS BY STREETS

WALNUT AVENUE

From Seaver Street to Homestead (WP403-5)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	240	8.00	1,920
Recondition 12" Gate	EA	1	150.00	150
Temporary 2" Main and Services	LF	240	.75	<u>180</u>
				2,250
Contingencies, Unit Cost Increase, Engineering - 21%				<u>470</u>
				2,720
				<u>USE \$2,800</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WALNUT AVENUE

From Homestead to Walnut Park (WP403-5)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I.Pipe	LF	130	8.00	1,040
Temporary 2" Main and Services	LF	130	.75	<u>100</u>
				1,140
Contingencies, Unit Cost Increase, Engineering - 21%				<u>240</u>
				1,380

USE \$1,400

PROJECT IMPROVEMENT REPORT	CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS	

WALNUT AVENUE

From Walnut Park to Ruthven (WP403-5)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	150	8.00	1,200
Recondition 12" Gate	EA	2	150.00	<u>300</u>
				1,500
Contingencies, Unit Cost Increase, Engineering - 21%				<u>320</u>
				1,820

USE \$1,800

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WALNUT AVENUE

From Abbotsford to Westminster (WP403-5)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	200	8.00	1,600
Contingencies, Unit Cost Increase, Engineering - 21%				<u>340</u>
				1,940

USE \$2,000

CODE NO. R-224(5)

WALNUT AVENUE

From Westminster to Cobden (WP403-5)

INTERIOR

ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
Clean and Line 12" C.I.Pipe	LF	400	8.00	3,200
Recondition 12" Gate	EA	1	150.00	150
Temporary 2" Main and Services	LF	200	.75	<u>150</u>
				3,500
Contingencies, Unit Cost Increase, Engineering - 21%				<u>730</u>
				4,230

USE \$4,200

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WALNUT AVENUE

From Cobden to Dennison (WP403-4 & 5)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	290	8.00	2,320
Temporary 2" Main and Services	LF	290	.75	<u>220</u>
				2,540
Contingencies, Unit Cost Increase, Engineering - 21%				<u>530</u>
				3,070
				<u>USE \$3,100</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WALNUT AVENUE

From Dennison to Crawford (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	190	8.00	1,520
Recondition 12" Gate	EA	1	150.00	150
Temporary 2" Main and Services	LF	190	.75	<u>140</u>
				1,810
Contingencies, Unit Cost Increase, Engineering - 21%				<u>380</u>
				2,190

USE \$2,200

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WALNUT AVENUE

From Bainbridge to Humboldt (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Cap Existing Main	EA	3	200.00	600
12" C.I. (Cement Lined) In Place	LF	120	15.00	1,800
12" Gate and Gate Box	EA	1	300.00	300
Rock Excavation	CY	30	12.00	<u>360</u>
				3,060
Contingencies, Unit Cost Increase, Engineering - 21%				<u>640</u>
				3,700

USE \$3,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WALNUT AVENUE

From Circuit to Warren(WP403-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" C.I.(Cement Lined)In Place	LF	300	15.00	4,500
12" Gate and Gate Box	EA	2	300.00	600
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	<u>100</u>
				5,750
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,210</u>
				6,960

USE \$7,000

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WARDMAN ROAD

From Walnut Park to Westminster (WP403-5)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	350	11.00	3,850
8" Gate and Gate Box	EA	2	200.00	400
House Service Transfer	EA	12	50.00	<u>600</u>
				4,850
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,020</u>
				5,870

USE \$5,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WAUMBECK STREET

From Crawford to Road H (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	450	11.00	4,950
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
Cap Abandoned Branch	EA	1	200.00	200
House Service Transfer	EA	8	50.00	<u>400</u>
				6,600
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,390</u>
				7,990

USE \$8,000

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WAYNE STREET

From Maple to Blue Hill Avenue (WP403-7)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I.Pipe	LF	630	8.00	5,040
Recondition 12" Gate	EA	2	150.00	300
Temporary 2" Main and Services	LF	630	.75	<u>470</u>
				5,810
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,220</u>
				7,030

USE \$7,000

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WENONAH STREET

From Waumbeck to Elm Hill (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	610	11.00	6,710
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
House Service Transfer	EA	12	50.00	<u>600</u>
				8,360
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,760</u>
				10,120

USE \$10,100

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD A - NORTH SIDE

From Washington to Humboldt (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	1840	11.00	20,240
8" Gate and Gate Box	EA	4	200.00	800
6" Gate and Gate Box	EA	5	150.00	750
Hydrant	EA	5	400.00	2,000
6" Hydrant Connector	LF	50	10.00	500
Rock Excavation	CY	600	12.00	<u>7,200</u>
				31,490
Contingencies, Unit Cost Increase, Engineering - 21%				<u>6,610</u>
				38,100

USE \$38,100

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD A - NORTH SIDE

From Humboldt to Warren (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	1150	11.00	12,650
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	3	150.00	450
Hydrant	EA	3	400.00	1,200
6" Hydrant Connector	LF	30	10.00	<u>300</u>
				15,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,150</u>
				18,150

USE \$18,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD A - SOUTH SIDE

From Washington to Galena (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	220	11.00	2,420
8" Gate and Gate Box	EA	1	200.00	200
Rock Excavation	CY	70	12.00	<u>840</u>
				3,460
Contingencies, Unit Cost Increase, Engineering - 21%				<u>730</u>
				4,190

USE \$4,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD A - SOUTH SIDE

From Mayfair to Walnut(WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	430	11.00	4,730
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	20	10.00	200
Rock Excavation	CY	140	12.00	<u>1,680</u>
				7,910
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,660</u>
				9,570

USE \$9,600

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD A - SOUTH SIDE

From Walnut to Humboldt (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	820	11.00	9,020
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	20	10.00	200
Rock Excavation	CY	270	12.00	<u>3,240</u>
				13,960
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,930</u>
				16,890
				<u>USE \$16,900</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD A - SOUTH SIDE

From Humboldt to Warren (WF403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	1150	11.00	12,650
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	3	150.00	450
Hydrant	EA	3	400.00	1,200
6" Hydrant Connector	LF	30	10.00	<u>300</u>
				15,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,150</u>
				18,150
				<u>USE \$18,200</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD A

Cross Connection N. to S. Sides at Walnut Street (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	100	11.00	1,100
8" Gate and Gate Box	EA	1	200.00	200
Rock Excavation	CY	30	12.00	<u>360</u>
				1,660
Contingencies, Unit Cost Increase, Engineering - 21%				<u>350</u>
				2,010

USE \$2,000

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ROAD B

From Catawba to Dale (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	310	11.00	3,410
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	<u>100</u>
				4,460
Contingencies, Unit Cost Increase, Engineering - 21%				<u>940</u>
				5,400

USE \$5,400

CODE NO. R-224(5)

ROAD C

From Humboldt to Laurel(WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	160	11.00	1,760
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	<u>100</u>
				2,610
Contingencies, Unit Cost Increase, Engineering - 21%				<u>550</u>
				3,160
USE \$3,200				

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD "D"

From Galena to Kensington (Incl. Gate on K. St.) (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	220	11.00	2,420
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
Rock Excavation	CY	70	12.00	<u>840</u>
				4,110
Contingencies, Unit Cost Increase, Engineering - 21%				<u>860</u>
				4,970

USE \$5,000

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD D

From Kensington to Mayfair (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	200	11.00	2,200
Rock Excavation	CY	70	12.00	<u>840</u>
				3,040
Contingencies, Unit Cost Increase, Engineering - 21%				<u>640</u>
				3,680

USE \$3,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD E

From Brinton to Elmore (WP403-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	270	11.00	2,970
8" Gate and Gate Box	EA	1	200.00	200
Rock Excavation	CY	60	12.00	<u>720</u>
				3,890
Contingencies, Unit Cost Increase, Engineering - 21%				<u>820</u>
				4,710
				<u>USE \$4,700</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD F

From Hollander to Holworthy (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I.(Cement Lined)In Place	LF	250	11.00	2,750
8" Gate and Gate Box (Includes new gates on Holworthy and Hollander Streets)	EA	4	200.00	800
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	<u>100</u>
				4,200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>880</u>
				5,080

USE \$5,100

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD G

From Hollander to Holworthy (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	240	11.00	2,640
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
Rock Excavation	CY	100	12.00	<u>1,200</u>
				4,490
Contingencies, Unit Cost Increase, Engineering - 21%				<u>940</u>
				5,430

USE \$5,400

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

ROAD H

From Howland to Waumbeck (WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	220	11.00	2,420
8" Gate and Gate Box	EA	1	200.00	200
Rock Excavation	CY	50	12.00	<u>600</u>
				3,220
Contingencies, Unit Cost Increase, Engineering - 21%				<u>680</u>
				3,900

USE \$3,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD J

From Hutchings to Homestead(WP403-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined)In Place (Includes 50' on Homestead)	LF	370	11.00	4,070
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	10	10.00	100
Rock Excavation	CY	80	12.00	<u>960</u>
				5,880
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,230</u>
				7,110

USE \$7,100

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

DUDLEY STREET

From Washington to Warren (WP403-1)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Relocate Existing Hydrant	EA	1	200.00	200
6" Hydrant Connector	LF	30	10.00	300
Cap Abandoned Branch	EA	1	200.00	<u>200</u>
				700
Contingencies, Unit Cost Increase, Engineering - 21%				<u>140</u>
				840

USE \$900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD "L"

From Columbus to Washington (WP403-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	1230	11.00	13,530
8" Gate and Gate Box	EA	5	200.00	1,000
6" Gate and Gate Box	EA	5	150.00	750
Hydrant	EA	5	400.00	2,000
6" Hydrant Connector	LF	50	10.00	500
House Service Transfer	EA	22	50.00	1,100
Rock Excavation	CY	130	12.00	<u>1,560</u>
				20,440
Contingencies, Unit Cost Increase, Engineering - 21%				<u>4,290</u>
				24,730

USE \$24,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD "M"

From Ritchie to Road "L" (WP403-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	930	11.00	10,230
8" Gate and Gate Box	EA	4	200.00	800
6" Gate and Gate Box	EA	3	150.00	450
Hydrant	EA	3	400.00	1,200
6" Hydrant Connector	LF	30	10.00	300
House Service Transfer	EA	41	50.00	2,050
Rock Excavation	CY	80	12.00	<u>960</u>
				15,990
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,360</u>
				19,350

USE \$19,400

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

ROAD "N"

From Road "M" to Road "L" and Marcella (WP403-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	1150	11.00	12,650
8" Gate and Gate Box	EA	6	200.00	1,200
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	20	10.00	200
House Service Transfer	EA	30	50.00	1,500
Rock Excavation	CY	70	12.00	840
				<u>17,490</u>
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,670</u>
				21,160

USE \$21,200

Poston R-24/R-224(5)

Exhibit "B"

91C of 100

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WARREN STREET

From Deckard to Townsend (WP403-6)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	400	8.00	3,200
Temporary 2" Main and Services	LF	400	.75	300
12" Gate and Gate Box	EA	1	300.00	<u>300</u>
				3,800
Contingencies, Unit Cost Increase, Engineering - 21%				<u>800</u>
				4,600

USE \$4,600

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WARREN STREET

From Townsend to Munroe (WP403-4&6)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I.Pipe	LF	360	8.00	2,880
Temporary 2" Main and Services	LF	360	.75	270
8" C.I.(Cement Lined)In Place	LF	20	11.00	220
12" Gate and Gate Box	EA	1	300.00	300
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	40	10.00	<u>400</u>
				4,820
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,010</u>
				5,830

Boston R-24/R-224(5) Exhibit "B" USE \$5,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

CODE NO. R-224(5)

WARREN STREET

From Munroe to Road A (WP403=4)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I.Pipe	LF	300	8.00	2,400
Temporary 2" Main and Services	LF	300	.75	230
12" Gate and Gate Box	EA	1	300.00	<u>300</u>
				2,930
Contingencies, Unit Cost Increase, Engineering - 21%				<u>620</u>
				3,550
				<u>USE \$3,600</u>

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WARREN STREET

From Road A to Dale (WP403-4)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	1030	8.00	8,240
Temporary 2" Main and Services	LF	1030	.75	770
8" C.I. (Cement Lined) In Place	LF	30	11.00	330
12" Gate and Gate Box	EA	3	300.00	900
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	40	10.00	400
Cap Abandoned Branches	EA	5	200.00	<u>1,000</u>
				12,390
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,600</u>
				14,990

USE \$15,000

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WARREN STREET

From Dale to Walnut (WP403-2&4)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	1250	8.00	10,000
Temporary 2" Main and Services	LF	1250	.75	940
8" C.I. (Cement Lined) In Place	LF	60	11.00	660
12" Gate and Gate Box	EA	2	300.00	600
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	80	10.00	800
Cap Abandoned Branches	EA	3	200.00	<u>600</u>
				15,100
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,170</u>
				18,270

USE \$18,300

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WARREN STREET

From Walnut to Regent (WP403-9)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	770	8.00	6,160
Temporary 2" Main and Services	LF	770	.75	580
8" C.I. (Cement Lined) in P Place	LF	20	11.00	220
12" Gate and Gate Box	EA	1	300.00	300
8" Gate and Gate Box	EA	1	200.00	200
6" Gate and Gate Box	EA	1	150.00	150
Hydrant	EA	1	400.00	400
6" Hydrant Connector	LF	40	10.00	400
Cap Abandoned Branches	EA	2	200.00	<u>400</u>
				8,810
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,850</u>
				10,660

USE \$10,700

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WARREN STREET

From Regent to Dudley (WP403-1&2)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Clean and Line 12" C.I. Pipe	LF	900	8.00	7,200
Temporary 2" Main and Services	LF	900	.75	670
8" C.I. (Cement Lined) In Place	LF	70	11.00	770
8" Gate and Gate Box	EA	2	200.00	400
6" Gate and Gate Box	EA	2	150.00	300
Hydrant	EA	3	400.00	1,200
6" Hydrant Connector	LF	80	10.00	800
Cap Abandoned Branches	EA	1	200.00	<u>200</u>
				11,540
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,420</u>
				13,960

USE \$14,000

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WASHINGTON STREET

From St. James to Dudley (WP403-1&2)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Hydrant	EA	2	400.00	800
6" Hydrant Connector	LF	20	10.00	200
6" Gate and Gate Box	EA	2	150.00	300
Cap Abandoned Branch	EA	1	200.00	<u>200</u>
				1,500
Contingencies, Unit Cost Increase, Engineering - 21%				<u>320</u>
				1,820

USE \$1,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "B" - HIGH SERVICE WATER COSTS BY STREETS

WASHINGTON STREET

From North Side to South Side of Road A (WP403-4)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" C.I. (Cement Lined) in Place	LF	100	15.00	1,500
12" Gate and Gate Box	EA	2	300.00	600
Rock Excavation	CY	30	12.00	<u>360</u>
				2,460
Contingencies, Unit Cost Increase, Engineering - 21%				<u>520</u>
				2,980

USE \$3,000

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT CODE NO. R-224(5)
EXHIBIT "C" - HIGH SERVICE WATER - UNIT COSTS

8" C.I. (CEMENT LINED)

ASSUME 6'-0" TRENCH DEPTH

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
8" C.I. (Cement Lined) In Place	LF	1.0	6.00	6.00
C.I. Fitting Allowance	LS	1.0	1.00	1.00
Trench Excavation and Backfill	CY	1.0	3.00	3.00
Gravel Borrow	CY	0.2	3.00	<u>.60</u>
				10.60

USE \$11.00 per LF

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "C" - HIGH SERVICE WATER - UNIT COSTS

12" C.I. (CEMENT LINED)

ASSUME 6'-0" TRENCH DEPTH

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" C.I. (Cement Lined) In Place	LF	1.0	9.00	9.00
C.I. Fitting Allowance	LS	1.0	1.50	1.50
Trench Excavation and Backfill	CY	1.0	3.00	3.00
Gravel Borrow	CY	0.2	3.00	<u>.60</u>
				14.10

USE \$15.00 per LF

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(5)

EXHIBIT "C" - HIGH SERVICE WATER - UNIT COSTS

16" C.I. (CEMENT LINED)

ASSUME 6'-0" TRENCH DEPTH

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
16" C.I. (Cement Lined) In Place	LF	1.0	13.50	13.50
C.I. Fitting Allowance	LS	1.0	1.50	1.50
Trench Excavation and Backfill	CY	1.0	3.00	3.00
Gravel Borrow	CY	0.3	3.00	<u>.90</u>
				18.90

USE \$19.00 per LF

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - HIGH SERVICE WATER - UNIT COSTS

CODE NO. R-224(5)

Clean and Line 12" C.I. Pipe

Subcontract price \$3.00 Per L.F.

Clean and Line 16" C.I. Pipe

Subcontract price \$9.00 Per L.F.

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENTS REPORT:	SANITARY SEWER AND STORM DRAINS	CODE NO. R-224(6)
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Reference is made to the following drawings, which accompany this report:

Sanitary Sewer and Storm Drains WP404-1 thru 7

The old Boston System handled both sanitary sewer and surface drainage in one system. The policy of the Sewage Division, Boston Public Works Department, is in new construction to handle the sewage and surface drainage by separate systems. This has been followed in Washington Park and will modernize this area of the City.

Certain assumed depths of trench excavation have been used which may change with detailed design.

Unit costs for the Sanitary Sewer and Storm Drain System were developed from information supplied by the Sewage Division and current unit costs of sewer and drainage installations in the immediate area of the Washington Park Project.

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "A" - SANITARY SEWER AND STORM DRAINS

CODE NO. R-224(6)

<u>INTERIOR STREETS</u>	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Alpine ("B"-1)	19,500	100	19,500
Brunswick ("B"-2)	7,100	100	7,100
Crawford ("B"-3)	4,500	100	4,500
Dale ("B"-4)	5,100	100	5,100
Elm Hill Avenue ("B"-5)	6,900	100	6,900
Elmore ("B"-6)	1,900	100	1,900
Galena ("B"-7)	11,300	100	11,300
Harold ("B"-8)	6,100	100	6,100
Hazelwood ("B"-9)	8,400	100	8,400
Humboldt Avenue ("B"-10 thru 12)	30,200	100	30,200
Maple Avenue ("B"-13)	3,600	100	3,600
Munroe ("B"-14)	900	100	900
Rockland ("B"-15)	900	100	900
Townsend ("B"-16 thru 19)	40,900	100	40,900
Wakullah ("B"-20 thru 21)	6,500	100	6,500
Walnut Avenue ("B"-22 thru 23)	15,900	100	15,900

<u>INTERIOR STREETS</u>	<u>Total Cost</u>	<u>%</u>	<u>To Project</u>
Waumbeck ("B"-24)	12,200	100	12,200
Wenonah ("B"-25)	9,900	100	9,900
Road "A" ("B"-26 thru 30)	115,500	100	115,500
Road "B" ("B"-31)	2,700	100	2,700
Road "C" ("B"-32)	5,800	100	5,800
Road "D" ("B"-33)	7,200	100	7,200
Road "E" ("B"-34)	9,600	100	9,600
Road "F" ("B"-35)	11,600	100	11,600
Road "G" ("B"-36)	5,200	100	5,200
Road "H" ("B"-37)	8,500	100	8,500
Road "J" ("B"-38)	5,700	100	5,700
Road "L" ("B"-38A)	34,700	100	34,700
Road "M" ("B"-38B)	27,800	100	27,800
Road "N" ("B"-38C)	28,200	100	28,200
Right-of-Way ("B"-39)	<u>11,600</u>	100	<u>11,600</u>
SUBTOTAL	465,900		465,900

BOUNDARY STREETS

Dudley ("B"-40)	8,000	50	4,000
Seaver ("B"-41)	10,600	50	5,300
Warren ("B"-42 thru 48)	99,300	50	49,650
Washington ("B"-49)	<u>8,100</u>	50	<u>4,050</u>
SUBTOTAL	126,000		63,000
GRAND TOTAL	591,900		528,900
Boston R-24/R-224(6)	Exhibit "A"		2 of 2

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

ALPINE STREET
(WP404-2)

From Alpine to St. James

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	530	6.50	3,445
12" Drain	LF	530	7.50	3,975
Manhole	EA	8	350.00	2,800
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	40	4.00	160
Rock Excavation	CY	370	12.00	4,440
House Connections	EA	14	50.00	700
				<u>16,120</u>

Contingencies, Unit Cost Increase, Engineering - 21% 3,380

19,500

USE \$19,500

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
 COSTS BY STREETS

BRUNSWICK STREET
(WP404-6)

From Elm Hill to Warren

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	440	6.50	2,860
Manhole	EA	2	350.00	700
Rock Excavation	CY	160	12.00	1,920
House Connection	EA	7	50.00	<u>350</u>
				5,830
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,220</u>
				7,050

USE \$7,100

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

CRAWFORD STREET
(WP404-6)

From Waumbeck to Hollander

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	100	6.50	650
24" Drain	LF	130	12.00	1,560
Manholes	EA	2	350.00	700
Rock Excavation	CY	70	12.00	<u>840</u>
				3,750
Contingencies, Unit Cost Increase, Engineering - 21%				<u>790</u>
				4,540
				<u>USE \$4,500</u>

CODE NO. R-224(6)

From Warren to Sherman

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	320	6.50	2,080
Manhole	EA	1	350.00	350
Rock Excavation	CY	150	12.00	<u>1,800</u>
				4,230
Contingencies, Unit Cost Increase, Engineering - 21%				<u>890</u>
				5,120

USE \$5,100

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ELM HILL AVENUE
(WP404-6 & 7)
From Georgia to Crawford

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	350	6.50	2,275
12" Drain	LF	50	7.50	375
Manhole	EA	3	350.00	1,050
Rock Excavation	CY	130	12.00	1,560
House Connections	EA	8	50.00	<u>400</u>
				5,660
Contingencies, Unit Cost Increase, Engineering-21%				<u>1,190</u>
				6,850

USE \$6,900

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
 COSTS BY STREETS

ELMORE STREET
(WP404-4)

From Elmore Park to Galena

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
24" Drain	LF	100	12.00	1,200
Manhole	EA	1	350.00	<u>350</u>
				1,550
Contingencies, Unit Cost Increase, Engineering - 21%				<u>330</u>
				1,880

USE \$1,900

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(6)

EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

GALENA STREET
(WP404-4)

From Elmore to Road "A"

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" Sanitary	LF	350	7.00	2,450
24" Drain	LF	350	12.00	4,200
Rock Excavation	CY	200	12.00	2,400
House Connections	EA	6	50.00	<u>300</u>
				9,350
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,960</u>
				11,310

USE \$11,300

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

HAROLD STREET
(WP404-4)

From Munroe to Road A

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	300	6.50	1,950
Manhole	EA	2	350.00	700
Rock Excavation	CY	150	12.00	1,800
House Connections	EA	12	50.00	<u>600</u>
				5,050
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,060</u>
				6,110

USE \$6,100

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

HAZELWOOD STREET
(WP404-4)

From Townsend to Munroe

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	390	6.50	2,535
Manhole	EA	2	350.00	700
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	60	4.00	240
Rock Excavation	CY	220	12.00	2,640
House Connections	EA	5	50.00	<u>250</u>
				6,965
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,460</u>
				8,425

USE \$8,400

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

HUMBOLDT AVENUE
(WP404-4)

From Townsend to Munroe

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	470	6.50	3,055
15" Drain	LF	90	8.50	765
Manhole	EA	3	350.00	1,050
Catch Basin	EA	3	300.00	900
10" Catch Basin Connector	LF	80	4.00	320
Rock Excavation	CY	300	12.00	3,600
House Connections	EA	3	50.00	<u>150</u>
				9,840
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,070</u>
				11,910

USE \$11,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

HUMBOLDT AVENUE
(WP404-4)

From Munroe to Road "A"

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
15" Drain	LF	400	8.50	3,400
Rock Excavation	CY	360	12.00	<u>4,320</u>
				7,720
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,620</u>
				9,340
				<u>USE \$9,300</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

HUMBOLDT AVENUE
WP404-4)

From Road "A" to Road "C"

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	250	6.50	1,625
24" Drain	LF	200	12.00	2,400
Manhole	EA	3	350.00	1,050
Rock Excavation	CY	200	12.00	<u>2,400</u>
				7,475
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,570</u>
				9,045

USE \$9,000

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

MAPLE AVENUE
(WP404-7)

From Nazing to Wayne

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	170	6.50	1,105
Manhole	EA	2	350.00	700
Rock Excavation	CY	80	12.00	960
House Connections	EA	5	50.00	<u>250</u>
				3,015
Contingencies, Unit Cost Increase, Engineering - 21%				<u>630</u>
				3,645
				<u>USE \$3,600</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

MUNROE STREET
(WP404-4)

At Warren

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	30	4.00	<u>120</u>
				720
Contingencies, Unit Cost Increase, Engineering - 21%				<u>150</u>
				870

USE \$900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROCKLAND STREET
(WP404-4)

From Rockland Avenue to Sherman

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Manhole	EA	1	350.00	350
Catch Basin	EA	1	300.00	300
10" Catch Basin Connector	LF	30	4.00	<u>120</u>
				770
Contingencies, Unit Cost Increase, Engineering - 21%				<u>160</u>
				930

USE \$900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

TOWNSEND STREET
(WP404-3&4)

From Washington to Walnut Avenue

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	1,050	6.50	6,825
Manhole	EA	6	350.00	2,100
Rock Excavation	CY	300	12.00	3,600
House Connections	EA	20	50.00	<u>1,000</u>
				13,525
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,840</u>
				16,365

USE \$16,400

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

TOWNSEND STREET
(WP404-4)

From Walnut to Harold

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	420	6.50	2,730
15" Drain	LF	50	8.50	425
Manhole	EA	3	350.00	1,050
Rock Excavation	CY	200	12.00	2,400
House Connections	EA	7	50.00	<u>350</u>
				6,955
Contingencies, Unit Cost Increase, Engineering-21%				<u>1,460</u>
				8,415

USE \$8,400

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
 COSTS BY STREETS

TOWNSEND STREET
(WP404-4)

From Harold to Humboldt

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	880	6.50	5,720
Manhole	EA	3	350.00	1,050
Rock Excavation	CY	400	12.00	4,800
House Excavation	EA	5	50.00	<u>250</u>
				11,820
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,480</u>
				14,300

USE \$14,300

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

TOWNSEND STREET
(WP404-4 & 6)

From Hazelwood to Warren

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Catch Basin	EA	4	300.00	1,200
10" Catch Basin Connector	LF	80	4.00	<u>320</u>
				1,520
Contingencies, Unit Cost Increase, Engineering - 21%				<u>320</u>
				1,840

USE \$1,800

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

WAKULLAH STREET
(WP404-2 & 4)

From Dale to Hewes

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
10" Sanitary	LF	150	6.50	975
Manhole	EA	1	350.00	350
House Connections	EA	4	50.00	<u>200</u>
				1,525
Contingencies, Unit Cost Increase, Engineering - 21%				<u>320</u>
				1,845

USE \$1,800

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
 COSTS BY STREETS

WAKULLAH STREET
(WP404-2)

From Hewes to Rockland Street

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	270	6.50	1,755
Manhole	EA	1	350.00	350
Rock Excavation	CY	100	12.00	1,200
House Connections	EA	12	50.00	<u>600</u>
				3,905
Contingencies, Unit Cost Increase, Engineering - 21%				<u>820</u>
				4,725

USE \$4,700

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

WALNUT AVENUE
(WP404-4)

From Humboldt to Dale

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	380	6.50	2,470
15" Drain	LF	140	8.50	1,190
Manhole	EA	4	350.00	1,400
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	40	4.00	160
House Connections	EA	2	50.00	<u>100</u>
				5,920
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,240</u>
				7,160

USE \$7,200

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

WALNUT AVENUE (Relocated)
(WP404-2)

From Circuit to Warren

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	250	6.50	1,625
24" Drain	LF	200	12.00	2,400
Manhole	EA	2	350.00	700
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	40	4.00	160
Rock Excavation	CY	140	12.00	<u>1,680</u>
				7,165
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,505</u>
				8,670

USE \$8,700

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(6)

EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETSWAUMBECK STREET

From Road "H" to Crawford (WP404-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	400	6.50	2,600
24" Drain	LF	450	12.00	5,400
Manhole	EA	1	350.00	350
Catch Basin	EA	1	300.00	300
10" Catch Basin Connector	LF	20	4.00	80
Rock Excavation	CY	80	12.00	960
House Connections	EA	8	50.00	<u>400</u>
				10,090
Contingencies, Unit Cost Increase, Engineering-21%				<u>2,120</u>
				12,210

USE \$12,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

WENONAH STREET
(WP404-6)

From Waumbeck to Elm Hill

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	600	6.50	3,900
Manhole	EA	3	350.00	1,050
Rock Excavation	CY	220	12.00	2,640
House Connection	EA	12	50.00	<u>600</u>
				8,190
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,720</u>
				9,910

USE \$9,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "A" (Center Line)
(WP404-4)

From Washington to Walnut Avenue

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" Drain	LF	130	7.50	975
15" Drain	LF	440	8.50	3,740
18" Drain	LF	180	9.50	1,710
Manhole	EA	6	350.00	2,100
Catch Basin	EA	12	300.00	3,600
10" Catch Basin Connector	LF	300	4.00	1,200
Rock Excavation	CY	500	12.00	<u>6,000</u>
				19,325
Contingencies, Unit Cost Increase, Engineering-21%				<u>4,060</u>
				23,385

USE \$23,400

CODE NO. R-224(6)

ROAD "A" (So. Side)

(WP404-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	380	6.50	2,470
Manhole	EA	2	350.00	700
Rock Excavation	CY	300	12.00	<u>3,600</u>
				6,770
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,420</u>
				8,190

USE \$8,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD A (South Side)
(WP404-4)

From Galena to Washington

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" Sanitary	LF	240	7.00	1,680
24" Drain	LF	240	12.00	2,880
Manhole	EA	4	350.00	1,400
Rock Excavation	CY	300	12.00	<u>3,600</u>
				9,560
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,010</u>
				11,570

USE \$11,600

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "A "
(WP404-4)

From Walnut to Humboldt

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary (North Side)	LF	660	6.50	4,290
12" Drain (Centerline)	LF	400	7.50	3,000
15" Drain (Centerline)	LF	380	8.50	3,230
10" Sanitary (South Side)	LF	800	6.50	5,200
Manhole	EA	9	350.00	3,150
Catch Basin	EA	10	300.00	3,000
10" Catch Basin Connector	LF	220	4.00	880
Rock Excavation	CY	1,000	12.00	<u>12,000</u>
				34,750
Contingencies, Unit Cost Increase, Engineering - 21%				<u>7,300</u>
				42,050

USE \$42,000

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "A"
(WP404-4)

From Humboldt to Warren

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary -(North Side)	LF	1,000	6.50	6,500
10" Sanitary -(South Side)	LF	1,050	6.50	6,825
18" Drain	LF	350	9.50	3,325
24" Drain	LF	60	12.00	720
Manhole	EA	10	350.00	3,500
Catch Basin	EA	10	300.00	3,000
10" Catch Basin Connector	LF	300	4.00	<u>1,200</u>
				25,070
Contingencies, Unit Cost Increase, Engineering - 21%				<u>5,260</u>
				30,330

USE \$30,300

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "B"
(WP404-4)

From Catawba to Dale

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	230	6.50	1,495
Manhole	EA	2	350.00	<u>700</u>
				2,195
Contingencies, Unit Cost Increase, Engineering - 21%				<u>460</u>
				2,655

USE \$2,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "C"
(WP404-4)

From Humboldt to Laurel

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" Sanitary	LF	140	7.00	980
24" Drain	LF	170	12.00	2,040
Manhole	EA	4	350.00	1,400
Catch Basin	EA	1	300.00	300
10" Catch Basin Connector	LF	20	4.00	<u>80</u>
				4,800
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,010</u>
				5,810

USE \$5,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "D"
(WP404-4)

From Mayfair to Galena

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	380	6.50	2,470
Manhole	EA	3	350.00	1,050
Rock Excavation	CY	200	12.00	<u>2,400</u>
				5,920
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,240</u>
				7,160

USE \$7,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "E"

(WP404-4)

From Brinton to Elmore

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	260	6.50	1,690
12" Drain	LF	250	7.50	1,875
Manhole	EA	4	350.00	1,400
Rock Excavation	CY	250	12.00	<u>3,000</u>
				7,965
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,670</u>
				9,635

USE \$9,600

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD F
(WP404-6)

From Holworthy to Hollander

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	320	6.50	2,080
24" Drain	LF	220	12.00	2,640
Manhole	EA	7	350.00	2,450
Catch Basin	EA	6	300.00	1,800
10" Catch Basin Connector	LF	160	4.00	<u>640</u>
				9,610
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,020</u>
				11,630

USE \$11,600

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(6)

EXHIBIT "B" - SANITARY SEWERS & STORM DRAININGS

COSTS BY STREETS

ROAD G

(WP404-6)

From Holworthy to Hollander

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	200	6.50	1,300
Manhole	EA	2	350.00	700
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	30	4.00	120
Rock Excavation	CY	130	12.00	<u>1,560</u>
				4,280
Contingencies, Unit Cost Increase, Engineering - <u>21%</u>				<u>900</u>
				5,180

USE \$5,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "H"
(WP404-6)

From Howland to Waumbeck

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	210	6.50	1,365
12" Drain	LF	230	7.50	1,725
Manhole	EA	4	350.00	1,400
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	100	4.00	400
Rock Excavation	CY	130	12.00	<u>1,560</u>
				7,050
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,480</u>
				8,530

USE \$8,500

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD J
(WP404-6)

From Hutchings to Homestead

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	250	6.50	1,625
Manhole	EA	2	350.00	700
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	80	4.00	320
Rock Excavation	CY	120	12.00	<u>1,440</u>
				4,685
Contingencies, Unit Cost Increase, Engineering - 21%				<u>980</u>
				5,665

USE \$5,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS AND STORM DRAINS
COST BY STREETS

CODE NO. R-224(6)

ROAD "L"

From Columbus to Washington (WP404-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	1220	6.50	7,930
12" Drain	LF	1250	7.50	9,375
Manhole	EA	11	350.00	3,850
Catch Basin	EA	11	300.00	3,300
10" Catch Basin Connector	LF	210	4.00	840
Rock Excavation	CY	190	12.00	2,280
House Connections	EA	22	50.00	<u>1,100</u>
				28,675
Contingencies, Unit Cost Increase, Engineering - 21%				<u>6,020</u>
				34,695

USE \$34,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS AND STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

ROAD "M"

From Ritchie to Road "L"

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	950	6.50	6,175
12" Drain	LF	970	7.50	7,275
Manhole	EA	10	350.00	3,500
Catch Basin	EA	8	300.00	2,400
10" Catch Basin Connector	LF	160	4.00	640
Rock Excavation	CY	75	12.00	900
House Connections	EA	41	50.00	<u>2,050</u>
				22,940
Contingencies, Unit Cost Increase, Engineering - 21%				<u>4,815</u>
				27,755

USE \$27,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS AND STORM DRAINS
COST BY STREETS

CODE NO. R-224(6)

ROAD "N"

From Road "M" to "L" and Marcella (WP404-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	1070	6.50	6,955
12" Drain	LF	1085	7.50	8,137
Manhole	EA	11	350.00	3,850
Catch Basin	EA	5	300.00	1,500
10" Catch Basin Connector	LF	105	4.00	420
Rock Excavation	CY	80	12.00	960
House Connections	EA	30	50.00	<u>1,500</u>
				23,322
Contingencies, Unit Cost Increase, Engineering - 21%				<u>4,898</u>
				28,220

USE \$28,200

Boston R-24/R-224(6)

Exhibit "B"

38C of 50

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

RIGHT-OF-WAY
(WP404-2&4)

From Road A to Bainbridge Street Right-of-Way

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	410	6.50	2,665
24" Drain	LF	330	12.00	3,960
Rock Excavation	CY	250	12.00	<u>3,000</u>
				9,625
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,020</u>
				<u>11,645</u>

USE \$11,600

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

DUDLEY STREET
(WP404-1)

From Washington to Warren

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	460	6.50	2,990
Manhole	EA	2	350.00	700
Catch Basin	EA	3	300.00	900
10" Catch Basin Connector	LF	100	4.00	400
Rock Excavation	CY	100	12.00	1,200
House Connections	EA	8	50.00	<u>400</u>
				6,590
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,380</u>
				7,970

USE \$8,000

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

SEAVER STREET
(WP404-5)

From Harold to Walnut

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	120	6.50	780
12" Drain	LF	120	7.50	900
15" Drain	LF	430	8.50	3,655
18" Drain	LF	200	9.50	1,900
Rock Excavation	CY	130	12.00	<u>1,560</u>
				8,795
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,850</u>
				10,645

USE \$10,600

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

WARREN STREET

(WP404-6)

From Deckard to Townsend

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	370	6.50	2,405
Manhole	EA	1	350.00	350
Catch Basin	EA	4	300.00	1,200
10" Catch Basin Connector	LF	120	4.00	480
Rock Excavation	CY	240	12.00	2,880
House Connections	EA	6	50.00	<u>300</u>
				7,615
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,600</u>
				9,215

USE \$9,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

WARREN STREET
(WP404-4&6)

From Townsend to Munroe

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	340	6.50	2,210
Manhole	EA	1	350.00	350
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	40	4.00	160
Rock Excavation	CY	200	12.00	2,400
House Connections q	EA	6	50.00	<u>300</u>
				6,020
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,260</u>
				7,280

USE \$7,300

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

WARREN STREET
(WP404-4)

From Munroe to Road "A"

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	250	6.50	1,625
Manhole	EA	1	350.00	350
Catch Basin	EA	2	300.00	600
10" Catch Basin Connector	LF	100	4.00	400
Rock Excavation	CY	120	12.00	1,440
House Connections	EA	4	50.00	<u>200</u>
				4,615
Contingencies, Unit Cost Increase, Engineering - 21%				<u>970</u>
				5,585

USE \$5,600

PROJECT IMPROVEMENT REPORT CODE NO. R-224(6)
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

WARREN STREET
(WP404-4)

From Road "A" to Dale

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	950	6.50	6,175
Manhole	EA	5	350.00	1,750
Catch Basin	EA	11	300.00	3,300
10" Catch Basin Connector	LF	200	4.00	800
Rock Excavation	CY	400	12.00	4,800
House Connections	EA	20	50.00	<u>1,000</u>
				17,825
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,740</u>
				21,565

USE \$21,600

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

WARREN STREET
(WP404-2 & 4)

From Dale to Walnut

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	1200	6.50	7,800
Manhole	EA	5	350.00	1,750
Catch Basin	EA	13	300.00	3,900
10" Catch Basin Connector	LF	300	4.00	1,200
Rock Excavation	CY	350	12.00	4,200
House Connections	EA	25	50.00	<u>1,250</u>
				20,100
Contingencies, Unit Cost Increase, Engineering - 21%				<u>4,220</u>
				24,320
				<u>USE \$24,300</u>

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(6)

EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

WARREN STREET
(WP404-2)

From Walnut to St. James

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	660	6.50	4,290
24" Drain	LF	130	12.00	1,560
Manhole	EA	2	350.00	700
Catch Basin	EA	3	300.00	900
10" Catch Basin Connector	LF	50	4.00	200
Rock Excavation	CY	180	12.00	2,160
House Connections	EA	10	50.00	<u>500</u>
				10,310
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,170</u>
				12,480

USE \$12,500

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

WARREN STREET
(WP404-1 & 2)

From St. James to Dudley

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	1,030	6.50	6,695
15" Drain	LF	40	8.50	340
Manhole	EA	7	350.00	2,450
Catch Basin	EA	10	300.00	3,000
10" Catch Basin Connector	LF	280	4.00	1,120
Rock Excavation	CY	100	12.00	1,200
House Connections	EA	15	50.00	<u>750</u>
				15,555
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,270</u>
				18,825

USE \$18,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - SANITARY SEWERS & STORM DRAINS
COSTS BY STREETS

CODE NO. R-224(6)

WASHINGTON STREET
(WP404-2)

From Dale to Circuit

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Sanitary	LF	380	6.50	2,470
12" Drain	LF	380	7.50	2,850
Manhole	EA	3	350.00	1,050
Catch Basin	EA	1	300.00	300
10" Catch Basin Connector	LF	10	4.00	<u>40</u>
				6,710
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,410</u>
				8,120

USE \$8,100

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - SANITARY SEWERS & STORM DRAINS
UNIT COSTS

CODE NO. R-224(6)

10" SANITARY SEWER

Assume 10'-0" Trench Depth

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Vitrified Clay - In Place	LF	1.00	2.50	2.50
Trench Excavation and Backfill	CY	1.2	3.00	3.60
Gravel Borrow	CY	0.2	3.00	<u>0.60</u>
				6.70

USE \$6.50 PER LF

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - SANITARY SEWERS & STORM DRAINS
UNIT COSTS

CODE NO. R-224(6)

12" SANITARY SEWER

Assume 10'-0" Trench Depth

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" Vitrified Clay - In Place	LF	1.00	3.00	3.00
Trench Excavation and Backfill	CY	1.2	3.00	3.60
Gravel Borrow	CY	0.2	3.00	<u>0.60</u>
				7.20

USE \$7.00 PER LF

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - SANITARY SEWERS & STORM DRAINS
UNIT COSTS

CODE NO. R-224(6)

10" SURFACE DRAIN (CATCH BASIN CONNECTOR)

Assume 5'-0" Trench Depth

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
10" Concrete Pipe - In Place	LF	1.00	2.00	2.00
Trench Excavation and Backfill	CY	0.6	3.00	1.80
Gravel Borrow	CY	0.1	3.00	<u>0.30</u>
				4.10

USE \$4.00 PER LF

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - SANITARY SEWERS & STORM DRAINS
UNIT COSTS

CODE NO. R-224(6)

12" SURFACE DRAIN

Assume 10'-0" Trench Depth

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
12" R.C. Pipe - In Place	LF	1.00	3.50	3.50
Trench Excavation and Backfill	CY	1.2	3.00	3.60
Gravel Borrow	CY	0.1	3.00	<u>0.30</u>
				7.40

USE \$7.50 PER LF

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - SANITARY SEWERS & STORM DRAINS
UNIT COSTS

CODE NO. R-224(6)

15" SURFACE DRAIN

Assume 10'-0" Trench Depth

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
15" R.C. Pipe - In Place	LF	1.00	4.00	4.00
Trench Excavation and Backfill	CY	1.3	3.00	3.90
Gravel Borrow	CY	0.2	3.00	<u>0.60</u>
				8.50

USE \$8.50 PER LF

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - SANITARY SEWERS & STORM DRAINS
UNIT COSTS

CODE NO. R-224(6)

18" SURFACE DRAIN

Assume 10'-0" Trench Depth

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
18" R.C. Pipe - In Place	LF	1.00	4.50	4.50
Trench Excavation and Backfill	CY	1.4	3.00	4.20
Gravel Borrow	CY	0.2	3.00	<u>0.60</u>
				9.30

USE \$9.50 PER LF

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(6)

EXHIBIT "C" - SANITARY SEWERS & STORM DRAINS

UNIT COSTS

24" SURFACE DRAIN

Assume 10'-0" Trench Depth

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
24" R.C. Pipe - In Place	LF	1.00	6.50	6.50
Trench Excavation and Backfill	CY	1.5	3.00	4.50
Gravel Borrow	CY	0.3	3.00	<u>0.90</u>
				11.90

USE \$12.00 PER LF

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT: POLICE SIGNAL SYSTEM CODE NO. R-224(7)

Reference is made to the following drawings, which accompany this report:

Police Signal System WP405-1 thru 10

The Police Signal Systems requires in each Conduit a trunk and circuit cable.

The existing Police Signal System is overtaxed, so many of the existing conduits cannot be used. The existing system must be maintained during construction of Washington Park, so removal and resetting of existing boxes, in many cases, is not feasible. Standards were established by the Signal Division of the Boston Police Department.

Unit cost figures were supplied by the Signal Division of the Boston Police Department, based on unit costs for similar work on areas adjacent to Washington Park.

The estimated cost for installation of conduit and cable outside the Project Area (Columbus Avenue, Roxbury Street, and Dudley Street) are charged 100% because without this connection on Columbus Avenue the total system within

the Project Area would not function. The conduit and cable outside the Project Area do not serve the outside area and their only function is to serve the project.

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "A" - POLICE SIGNAL SYSTEM

CODE NO. R-224(7)

	<u>Total</u> <u>Cost</u>	<u>%</u>	<u>Charge</u> <u>To Project</u>
<u>INTERIOR STREETS</u>			
Dale ("B"-1)	5,600	100	5,600
Humboldt Avenue ("B"-2)	6,800	100	6,800
Regent ("B"-3)	3,600	100	3,600
Walnut ("B"-4)	2,900	100	2,900
Waumbeck ("B"-5 thru 7)	17,600	100	17,600
Road "A" ("B"-8)	9,600	100	9,600
Road "L" ("B"-8A)	11,900	100	11,900
Road "M"	<u>4,500</u>	100	<u>4,500</u>
SUBTOTAL	62,500		62,500
<u>BOUNDARY STREETS</u>			
Dudley ("B"-9)	16,700	50	8,350
Warren ("B"-10)	<u>2,000</u>	50	<u>1,000</u>
SUBTOTAL	18,700		9,350

<u>OUTSIDE BOUNDARY</u>	<u>Total Cost</u>	<u>%</u>	<u>Change To Project</u>
Columbus Avenue ("B"-11)	9,400	100	9,400
Roxbury (B"-12 thru 13)	27,500	100	27,500
Dudley ("B"-14 thru 18)	<u>122,400</u>	100	<u>122,400</u>
SUBTOTAL	159,300		159,300
GRAND TOTAL	240,500		231,150

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

DALE STREET

From Washington to Regent (WP405-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	500	5.00	2,500
Cable	LF	500	3.00	1,500
Manhole	EA	1	600.00	<u>600</u>
				4,600
Contingencies, Unit Cost Increase, Engineering - 21%				<u>970</u>
				5,570
				<u>USE \$5,600</u>

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

HUMBOLDT AVENUE

From Road A to Walnut (WP405-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	550	5 00	2,750
Cable	LF	550	3 00	1,650
Manhole	EA	2	600.00	<u>1,200</u>
				5,600
Contingencies, Unit Cost Increase. Engineering - 21%				<u>1,180</u>
				6,780

USE \$6,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLIC SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

REGENT STREET

From Dale to Rock (WP405-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	300	5.00	1,500
Cable	LF	300	3.00	900
Manhole	EA	1	600.00	<u>600</u>
				3,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>630</u>
				<u>3,630</u>
				<u>USE \$3,600</u>

PROJECT IMPROVEMENT REPORT

CODE NO. R-227(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

WALNUT STREET (Relocated)

From Circuit to Warren (WP405-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	220	5.00	1,100
Cable	LF	220	3.00	660
Manhole	EA	1	600.00	<u>600</u>
				2,360
Contingencies, Unit Cost Increase, Engineering - 21%				<u>500</u>
				2,860

USE \$2,900

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

WAUMBECK STREET

From Warren to Wenonah (WP405-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	600	5.00	3,000
Cable	LF	600	3.00	1,800
Manhole	EA	2	600.00	<u>1,200</u>
				6,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,260</u>
				7,260

USE \$7,300

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

WAUMBECK STREET

From Wenonah to Wabeno (WP405-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	450	5 00	2,250
Cable	LF	450	3.00	1,350
Manhole	EA	1	600.00	<u>600</u>
				4,200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>880</u>
				5,080
				<u>USE \$5,100</u>

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

WAUMBECK STREET

From Wabeno to Humboldt (WP405-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	400	5 00	2,000
Cable	LF	400	3.00	1,200
Manhole	EA	1	600.00	600
Signal Box	EA	1	500 00	<u>500</u>
				4,300
Contingencies, Unit Cost Increase, Engineering - 21%				<u>900</u>
				5,200

USE \$5,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

ROAD A

From Walnut to Humboldt (WP405-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	700	5.00	3,500
Cable	LF	700	3.00	2,100
Manhole	EA	3	600.00	1,800
Signal Box	EA	1	500.00	<u>500</u>
				7,900
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,660</u>
				9,560

USE \$9,600

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - STREET COST BY STREETS

CODE NO.. R-224(2)

"M" STREET

From "L" Street (WP405-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUAN.</u>	<u>UNIT CCST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	330	5.00	1,650
Cable	LF	330	3.00	990
Manhole	EA	1	600.00	600
Signal Box	EA	1	500.00	500
				<u>3,740</u>
Contingencies, Unit Cost Increase, Engineering - 21%				785
				<u>4,525</u>

USE \$4,500

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

DUDLEY STREET

From Washington to Warren (WP405-1)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place	LF	600	9.00	5,400
Cable (2 Per Conduit)	LF	2,400	3.00	7,200
Manhole	EA	2	600.00	<u>1,200</u>
				13,800
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,900</u>
				16,700

USE \$16,700

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

WARREN STREET

From Walnut (Relocated) to Walnut(Abandoned) (WP405-2)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	130	5 00	650
Cable	LF	130	3 00	390
Manhole	EA	1	600 00	<u>600</u>
				1,640
Contingencies, Unit Cost Increase, Engineering - 21%				<u>340</u>
				1,980

USE \$2,000

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

COLUMBUS AVENUE

From Tremont to Roxbury (WP405-8)

OUTSIDE BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place	LF	300	9.00	2,700
Cable (2 Per Conduit)	LF	1,200	3.00	3,600
Manhole	EA	2	600.00	1,200
Pavement Replacement	SY	75	4.00	<u>300</u>
				7,800
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,640</u>
				9,440

USE \$9,400

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

ROXBURY STREET

From Columbus Avenue to Elmwood (WP405-8)

OUTSIDE BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place	LF	200	9.00	1,800
Cable (2 per Conduit)	LF	800	3.00	2,400
Manhole	EA	1	600.00	600
Pavement Replacement	SY	50	4.00	<u>200</u>
				5,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,050</u>
				6,050

USE \$6,100

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

ROXBURY STREET

From Elmwood to Dudley (WP405-1 & 8)

OUTSIDE BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place	LF	750	9 00	6,750
Cable (2 Per Conduit)	LF	3,000	3.00	9,000
Manhole	EA	2	600.00	1,200
Pavement Replacement	SY	180	4.00	<u>720</u>
				17,670
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,710</u>
				21,380

USE \$21,400

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

DUDLEY STREET

From Roxbury to Putnam (WP405-1)

OUTSIDE BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place LF		800	9.00	7,200
Cable (2 Per Conduit)	LF	3,200	3.00	9,600
Manhole	EA	2	600.00	1,200
Pavement Replacement	SY	190	4.00	<u>760</u>
				18,760
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,940</u>
				22,700

USE \$22,700

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

DUDLEY STREET

From Putnam to Washington (WP405-1)

OUTSIDE BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place	LF	1,000	9.00	9,000
Cable (2 Per Conduit)	LF	4,000	3.00	12,000
Manhole	EA	3	600.00	1,800
Pavement Replacement	SY	240	4.00	<u>960</u>
				23,760
Contingencies, Unit Cost Increase, Engineering - 21%				<u>4,990</u>
				28,750

USE \$28,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(7)

EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

DUDLEY STREET

From Warren to Mt. Pleasant (WP405-1 & 9)

OUTSIDE BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place	LF	1,050	9.00	9,450
Cable (2 Per Conduit)	LF	4,200	3.00	12,600
Manhole	EA	4	600.00	2,400
Pavement Replacement	SY	260	4.00	<u>1,040</u>
				25,490
Contingencies, Unit Cost Increase, Engineering - 21%				<u>5,350</u>
				30,840

USE \$30,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

DUDLEY STREET

From Mt. Pleasant to Adams (WP405-9)

OUTSIDE BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place LF	LF	600	9.00	5,400
Cable (2 Per Conduit)	LF	2,400	3.00	7,200
Manhole	EA	2	600.00	1,200
Pavement Replacement	SY	145	4.00	<u>580</u>
				14,380
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,020</u>
				17,400

USE \$17,400

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - POLICE SIGNAL SYSTEM - COSTS BY STREETS

CODE NO. R-224(7)

DUDLEY STREET

From Adams to Hampden (WP405-9 & 10)

OUTSIDE BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
2 - 3" W.I. Conduits - In Place LF	LF	800	9.00	7,200
Cable (2 Per Conduit)	LF	3,200	3.00	9,600
Manhole	EA	2	600.00	1,200
Pavement Replacement	SY	190	4.00	<u>760</u>
				18,760
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,940</u>
				22,700

USE \$22,700

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PROJECT IMPROVEMENT REPORT CODE NO. R-224(7)
EXHIBIT "C" - POLICE SIGNAL SYSTEMS - UNIT COSTS

3" W.I. CONDUIT - IN PLACE

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER L.F.</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit	LF	1.0	4.00	4.00
Pull Wire	LF	1.0	0.10	0.10
Trench Excavation & Backfill	CY	0.15	3.00	<u>0.45</u>
				4.55

USE \$5.00 PER L.F.

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - POLICE SIGNAL SYSTEMS - UNIT COSTS

CODE NO. R-224(7)

2 - 3" W.I. CONDUITS - IN PLACE

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit	LF	2.0	4.00	8.00
Pull Wire	LF	2.0	0.10	0.20
Trench Excavation & Backfill	CY	0.15	3.00	<u>0.45</u>
				8.65

USE \$9.00 PER LF

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WASHINGTON PARK PROJECT
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PROJECT IMPROVEMENTS REPORT: FIRE ALARM SYSTEM CODE NO. R-224(8)

Reference is made to the following drawings, which accompany this report:

Fire Alarm System WP406-1 thru 7

The new Fire Alarm System for Washington Park provides for some new conduit and cables, distribution manholes. Some of the existing conduit, and cables, distribution manholes and all the existing fire boxes will be used. In some cases the new Police Signal Manholes will be used for the Fire Alarm System.

The system is to the standards of the Fire Alarm Division, Boston Fire Department. The total estimate and unit costs have been taken from similar work of the Fire Alarm Division and reflect costs for this portion of the City.

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PROJECT IMPROVEMENT REPORT
EXHIBIT "A" - FIRE ALARM SYSTEM

CODE NO. R-224(8)

	<u>Total</u> <u>Cost</u>	<u>%</u>	<u>Charge</u> <u>To Project</u>
<u>INTERIOR STREETS</u>			
Walnut ("B"-1)	2,100	100	2,100
Humboldt Avenue ("B"-2)	5,300	100	5,300
Road "A" ("B"-3)	7,900	100	7,900
Road "B" ("B"-4)	3,300	100	3,300
Road "L" ("B"-4A)	11,700	100	11,700
Road "M" ("B"-4B)	3,800	100	3,800
Road "N" ("B"-4C)	6,900	100	6,900
Miscellaneous Streets ("B"-5)	<u>1,800</u>	100	<u>1,800</u>
SUBTOTAL	42,800		42,800
<u>BOUNDARY STREETS</u>			
Warren ("B"-6)	1,300	50	650
Miscellaneous Streets ("B"-7)	<u>1,800</u>	50	<u>900</u>
SUBTOTAL	3,100		1,550
GRAND TOTAL	45,900		44,350
Boston R-24/R-224(8)	Exhibit "A"		1 of 1

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PROJECT IMPROVEMENT REPORT CODE NO. R-224(8)
EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

WALNUT STREET (Relocated)

From Circuit to Warren (WP406-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit-In Place	LF	220	5.00	1,100
Cable	LF	220	3.00	<u>660</u>
				1,760
Contingencies, Unit Cost Increase, Engineering - 21%				<u>370</u>
				2,130
				<u>USE \$2,100</u>

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

CODE NO. R-224(8)

HUMBOLDT AVENUE

From Road A to Walnut (WP406-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	550	5.00	2,750
Cable	LF	550	3.00	<u>1,650</u>
				4,400
Contingencies, Unit Cost Increase, Engineering - 21%				<u>920</u>
				5,320

USE \$5,300

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(8)

EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

ROAD A

From Walnut to Humboldt (WP406-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	750	5.00	3,750
Cable	LF	750	3.00	2,250
Signal Box	EA	1	500.00	<u>500</u>
				6,500
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,370</u>
				7,870

USE \$7,900

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(8)

EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

ROAD B

From Catawba to Dale (WP406-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	300	5.00	1,500
Cable	LF	300	3.00	900
Remove and Reset Signal Box	EA	1	300.00	<u>300</u>
				2,700
Contingencies, Unit Cost Increase, Engineering - 21%				<u>570</u>
				3,270

USE \$3,300

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

CODE NO. R-224(8)

ROAD "L"

From Washington to Road "M" (WP406-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	1080	5.00	5,400
Cable	LF	1080	3.00	3,240
Manholes (Use Police Signal)	EA			
Signal Box	EA	2	500.00	<u>1,000</u>
				9,640
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,024</u>
				11,664

USE \$11,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

CODE NO. R-224(8)

ROAD "M"

From Road "L" (WP406-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	330	5.00	1,650
Cable	LF	330	3.00	990
Manhole (Use Police Signal)	EA			
Signal Box	EA	1	500.00	<u>500</u>
				3,140
Contingencies, Unit Cost Increase, Engineering - 21%				<u>659</u>
				3,799

USE \$3,800

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

CODE NO. R-224(8)

ROAD "N"

From "L" Street (WP406-3)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit - In Place	LF	500	5.00	2,500
Cable	LF	500	3.00	1,500
Manhole	EA	2	600.00	1,200
Signal Box	EA	1	500.00	<u>500</u>
				5,700
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,197</u>
				6,897

USE \$6,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

CODE NO. R-224(8)

INTERIOR STREETS

Elm Hill Avenue at Howland
Humboldt at Townsend
Rockland Street at Rockland Avenue

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Replacement of Existing Signal Box with Three Fold Type	EA	3	500.00	1,500
Contingencies, Unit Cost Increase, Engineering - 21%				<u>315</u>
				1,815

USE \$1,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(8)

EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

WARREN STREET

From Walnut(Relocated)to Walnut (Abandoned) (WP406-2)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit-In Place	LF	130	5.00	650
Cable	LF	130	3.00	<u>390</u>
				1,040
Contingencies, Unit Cost Increase, Engineering - 21%				<u>220</u>
				1,260

USE \$1,300

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - FIRE ALARM SYSTEM - COSTS BY STREETS

CODE NO. R-224(8)

BOUNDARY STREETS

Warren at Wabon
Washington at Dale
Washington at Valentine

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Replacement of Existing Signal Box with Three-Fold Type	EA	3	500.00	1,500
Contingencies, Unit Cost Increase, Engineering - 21%				<u>315</u>
				1,815
				<u>USE \$1,800</u>

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PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - FIRE ALARM SYSTEM - UNIT COSTS

CODE NO. R-224(8)

3" W.I. CONDUIT - IN PLACE

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
3" W.I. Conduit	LF	1.0	4.00	4.00
Pull Wire	LF	1.0	0.10	0.10
Trench Excavation & Backfill	CY	0.15	3.00	<u>0.45</u>
				4.55

USE \$5.00 PER LF

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PROJECT IMPROVEMENT REPORT: TRAFFIC SIGNAL SYSTEM CODE NO. R-224(9)

Reference is made to the following drawings, which accompany this report:

Traffic Signal System - WP407-1 thru 6

The traffic signal system in the Project area was found to be inadequate to serve the new street layout. All existing signals are of recent (since 1948) installation or replacement and with the proposed improvements will be serviceable for another ten to twenty years. However, additional signals are required to serve new street layouts and new developments proposed for the area. All existing signals have push button controls for the protection and convenience of the pedestrian. There is no synchronization or central control. The major improvements to the existing signals are the installation of pedestrian "WALK-DON'T WALK" signals; the installation of magnetic detectors when the volume of the traffic on the entering streets fluctuates widely; the relocation and installation of signals to conform to new one-way street patterns; and adjustments necessitated by the widening of existing streets.

Since all streets having a pavement width of 26 feet or less are now considered one-way and many formerly through streets are cut off or abandoned, we have in effect channelized all traffic to a few major streets. This increase in traffic volume on the major streets requires additional traffic signals at major street

Boston R-24 / R-224 (9) 1 of 2

intersections, not only to move the traffic in an efficient manner but also to protect the pedestrian at school crossings and parks.

The proposed signals, like the existing signals, should have individual controls at each intersection; the only exception is on Road "A" where the signals are proposed to be interconnected into a pre-timed progressive system.

The proposed traffic control system is in accordance with standards established by the Parking & Traffic Commission, City of Boston.

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PROJECT IMPROVEMENT REPORT
EXHIBIT "A" - TRAFFIC SIGNAL SYSTEM

CODE NO. R-224(9)

<u>INTERIOR INTERSECTIONS</u>	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Circuit-Regent ("B"-1)	6,500	100	6,500
Humboldt-Crawford ("B"-2)	9,700	100	9,700
Humboldt-Harrishof-Deckard ("B"-3)	9,200	100	9,200
Humboldt-Waumbuck ("B"-4)	7,100	100	7,100
St. James ("B"-5)	4,000	100	4,000
Townsend-Humboldt ("B"-6)	14,100	100	14,100
Townsend-Walnut Avenue ("B"-7)	3,900	100	3,900
Walnut Avenue-Dale ("B"-8)	8,800	100	8,800
Walnut Avenue-Holworthy-Crawford ("B"-9)	9,100	100	9,100
Walnut Avenue-Humboldt ("B"-10)	4,900	100	4,900
Walnut Avenue-Munroe-Elmore ("B"-11)	8,100	100	8,100
Road "A"-Humboldt ("B"-12)	<u>59,200</u>	100	<u>59,200</u>
SUBTOTAL	144,600		144,600

BOUNDARY INTERSECTIONS	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Seaver-Blue Hill Avenue ("B"-13)	3,600	50	1,800
Seaver-Elm Hill ("B"-14)	5,600	50	2,800
Seaver-Humboldt ("B"-15)	5,400	75	4,050
Seaver-Maple ("B"-16)	5,600	75	4,200
Seaver-Walnut ("B"-17)	5,400	50	2,700
Warren-Blue Hill Avenue ("B"-18)	2,800	50	1,400
Warren-Dale ("B"-19)	16,400	50	8,200
Warren-Rockland ("B"-20)	7,900	50	3,950
Warren-St. James-Regent ("B"-21)	6,600	50	3,300
Warren-Townsend ("B"-22)	11,600	50	5,800
Warren-Walnut-Circuit ("B"-23)	14,900	50	7,450
Warren-Waumbeck-Elm Hill ("B"-24)	5,000	75	3,750
Warren-Road "A" ("B"-25)	19,200	75	14,400
Washington-Columbus ("B"-26)	2,700	50	1,350
Washington-Dale ("B"-27)	4,900	50	2,450
Washington-Marcella ("B"-28)	4,800	50	2,400
Washington-Road "A" ("B"-29)	<u>18,500</u>	75	<u>13,875</u>
SUBTOTAL	140,900		70,000
GRAND TOTAL	285,500		214,600

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PROJECT IMPROVEMENT REPORT CODE NO. R-224(9)
EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CIRCUIT REGENT
(WP407-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	3	120.00	360
Housing	EA	3	75.00	225
Conduit and Excavation	LF	180	10.00	1,800
Cable	LF	220	0.80	176
Pedestrian Signal	EA	4	100.00	400
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,200.00	<u>1,200</u>
				5,361
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,126</u>
				6,487

USE \$6,500

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

HUMBOLDT-CRAWFORD
(WP407-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	5	120.00	600
Housing	EA	9	75.00	675
Conduit and Excavation	LF	200	10.00	2,000
Cable	LF	250	0.80	200
Pedestrian Signal	EA	8	100.00	800
Controller	EA	1	1,200.00	1,200
Installation	LS	1	2,500.00	<u>2,500</u>
				7,975
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,675</u>
				9,650

USE \$9,700

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

HUMBOLDT-HARRISHOF-DECKARD
(WP407-6)

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	4	120.00	480
Housing	EA	6	75.00	450
Conduit and Excavation	LF	200	10.00	2,000
Cable	LF	250	0.80	200
Pedestrian Signal	EA	8	100.00	800
Controller	EA	1	1,200.00	1,200
Installation	LS	1	2,500.00	<u>2,500</u>
				7,630
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,602</u>
				9,232

USE \$9,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

HUMBOLDT-WAUMBECK
(WP407-6)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	1	120.00	120
Housing	EA	3	75.00	225
Conduit and Excavation	LF	75	10.00	750
Cable	LF	100	0.80	80
Pedestrian Signal	EA	8	100.00	800
Detector	EA	1	70.00	70
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	2,500.00	<u>2,500</u>
				5,855
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,230</u>
				7,085

USE \$7,100

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

ST. JAMES STREET
(WP407-2)INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	2	120.00	240
Housing	EA	2	75.00	150
Conduit and Excavation	LF	40	10.00	400
Cable	LF	50	0.80	40
Pedestrian Signal	EA	2	100.00	200
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,100.00	<u>1,100</u>
				3,330
Contingencies, Unit Cost Increase, Engineering - 21%				<u>699</u>
				4,029

USE \$4,000

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

TOWNSEND-HUMBOLDT

(WP407.4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	4	120.00	480
Post - Relocated	EA	4	60.00	240
Housing	EA	2	75.00	150
Conduit and Excavation	LF	550	10.00	5,500
Cable	LF	600	0.80	480
Pedestrian Signal	EA	8	100.00	800
Controller	EA	1	1,200.00	1,200
Installation	LS	1	2,800.00	<u>2,800</u>
				11,650
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,447</u>
				14,097

USE \$14,100

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

TOWNSEND-WALNUT AVENUE
(WP407-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	8	100.00	800
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,000.00	<u>1,000</u>
				3,250
Contingencies, Unit Cost Increase, Engineering - 21%				<u>683</u>
				3,933

USE \$3,900

PROJECT IMPROVMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WALNUT AVENUE-DALE

(WP407-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	4	120.00	480
Housing	EA	9	75.00	675
Conduit and Excavation	LF	180	10.00	1,800
Cable	LF	220	0.80	176
Pedestrian Signal	EA	8	100.00	800
Detector	EA	1	70.00	70
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	2,000.00	2,000
				7,311
Contingencies, Unit Cost Increase, Engineering - 21%				1,535
				8,846

USE \$8,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WALNUT AVENUE-HOLWORTHY-CRAWFORD

(WP407-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	4	120.00	480
Housing	EA	8	75.00	600
Conduit and Excavation	LF	180	10.00	1,800
Cable	LF	220	0.80	176
Pedestrian Signal	EA	8	100.00	800
Controller	EA	1	1,200.00	1,200
Installation	LS	1	2,500.00	<u>2,500</u>
				7,556
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,587</u>
				9,143

USE \$9,100

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WALNUT AVENUE-HUMBOLDT

(WP407-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	2	120.00	240
Housing	EA	6	75.00	450
Conduit and Excavation	LF	60	10.00	600
Cable	LF	80	0.80	64
Pedestrian Signal	EA	2	100.00	200
Detector	EA	1	70.00	70
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,100.00	<u>1,100</u>
				4,034
Contingencies, Unit Cost Increase, Engineering - 21%				<u>847</u>
				4,881

USE \$4,900

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WALNUT AVENUE-MUNROE-ELMORE

(WP40(-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	4	120.00	480
Housing	EA	9	75.00	675
Conduit and Excavation	LF	180	10.00	1,800
Cable	LF	220	0.80	176
Pedestrian Signal	EA	4	100.00	400
Detector	EA	1	70.00	70
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,800.00	<u>1,800</u>
				6,711
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,409</u>
				8,120

USE \$8,100

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

ROAD "A" - HUMBOLDT AVENUE
(WP407-4)INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	10	120.00	1,200
Housing	EA	14	75.00	1,050
Conduit and Excavation	LF	3600	10.00	36,000
Cable	LF	3750	0.80	3,000
Pedestrian Signal	EA	12	100.00	1,200
Controller	EA	1	1,200.00	1,200
Master Controller	EA	1	1,300.00	1,300
Installation	LS	1	4,000.00	<u>4,000</u>
				48,950
Contingencies, Unit Cost Increase, Engineering - 21%				<u>10,280</u>
				59,230

USE \$59,200

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

SEAVER-BLUE HILL AVENUE

(WP407-7)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	16	100.00	1,600
Installation	LS	1	1,400.00	<u>1,400</u>
				3,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>630</u>
				3,630

USE \$3,600

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

SEAVER-ELM HILL
(WP407-7)
BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	12	100.00	1,200
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,000.00	1,000
Installation	LS	1	2,200.00	<u>2,200</u>
				4,650
Contingencies, Unit Cost Increase, Engineering - 21%				<u>977</u>
				5,627

USE \$5,600

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. P-224(9)

SEAVER-HUMBOLDT

(WP407-7)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	12	100.00	1,200
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,800.00	<u>1,800</u>
				4,450
Contingencies, Unit Cost Increase, Engineering - 21%				<u>935</u>
				5,385

USE \$5,400

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

SEAVER-MAPLE
(W-407-7)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	12	100.00	1,200
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,000.00	1,000
Installation	LS	1	2,200.00	<u>2,200</u>
				4,650
Contingencies, Unit Cost Increase, Engineering - 21%				<u>977</u>
				5,627

USE \$5,600

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

SEAVER-WALNUT

(WP407-5)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	12	100.00	1,200
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,800.00	<u>1,800</u>
				4,450
Contingencies, Unit Cost Increase, Engineering-21%				<u>935</u>
				5,385

USE \$5,400

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

WARREN-BLUE HILL AVENUE

(WP407-7)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	1	120.00	120
Pedestrian Signal	EA	10	100.00	1,000
Installation	LS	1	1,200.00	<u>1,200</u>
				2,320
Contingencies, Unit Cost Increase, Engineering-21%				<u>487</u>
				2,807

USE \$2,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WARREN-DALE

(WP407-4)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	8	120.00	960
Housing	EA	14	75.00	1,050
Conduit and Excavation	LF	440	10.00	4,400
Cable	LF	570	0.80	456
Pedestrian Signal	EA	12	100.00	1,200
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	4,000.00	<u>4,000</u>
				13,516
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,838</u>
				16,354

USE \$16,400

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

WARREN-ROCKLAND

(WP407-4)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	2	120.00	240
Post - Relocated	EA	2	60.00	120
Housing	EA	3	75.00	225
Conduit and Excavation	LF	200	10.00	2,000
Cable	LF	230	0.80	184
Pedestrian Signal	EA	8	100.00	800
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,500.00	<u>1,500</u>
				6,519
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,369</u>
				7,888

USE \$7,900

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WARREN-ST. JAMES-REGENT

(WP407-2)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	2	120.00	240
Post - Relocated	EA	2	60.00	120
Post - Removed	EA	3	20.00	60
Conduit and Excavation	LF	175	10.00	1,750
Cable	LF	200	0.80	160
Pedestrian Signal	EA	12	100.00	1,200
Pushbutton	EA	1	12.00	12
Controller	EA	1	800.00	800
Installation	LS	1	1,100.00	<u>1,100</u>
				5,442
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,143</u>
				6,585

USE \$6,600

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WARREN-TOWNSEND
(WP407-6)BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	2	120.00	240
Post - Relocated	EA	4	60.00	240
Housing	EA	7	75.00	525
Conduit and Excavation	LF	400	10.00	4,000
Cable	LF	450	0.80	360
Pedestrian Signal	EA	8	100.00	800
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	2,000.00	<u>2,000</u>
				9,615
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,019</u>
				11,634

USE \$11,600

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WARREN-WALNUT-CIRCUIT

(WP407-2)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	9	120.00	1,080
Housing	EA	15	75.00	1,125
Conduit and Excavation	LF	330	10.00	3,300
Cable	LF	490	0.80	392
Pedestrian Signal	EA	12	100.00	1,200
Controller	EA	1	1,200.00	1,200
Installation	LS	1	4,000.00	<u>4,000</u>
				12,297
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,582</u>
				14,879

USE \$14,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

WARREN-WAUMBECK-ELM HILL
(WP407-6)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	1	120.00	120
Pedestrian Signal	EA	8	100.00	800
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,800.00	<u>1,800</u>
				4,170
Contingencies, Unit Cost Increase, Engineering - 21%				<u>876</u>
				5,046

USE \$5,000

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION.

WARREN-ROAD "A"
(WP407-4)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	12	120.00	1,440
Housing	EA	16	75.00	1,200
Conduit and Excavation	LF	600	10.00	6,000
Cable	LF	750	0.80	600
Pedestrian Signal	EA	14	100.00	1,400
Controller	EA	1	1,200.00	1,200
Installation	LS	1	4,000.00	<u>4,000</u>
				15,840
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,326</u>
				19,166

USE \$19,200

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WASHINGTON-COLUMBUS

(WP407-5)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	12	100.00	1,200
Installation	LS	1	1,000.00	<u>1,000</u>
				2,200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>462</u>
				2,662

USE \$2,700

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

WASHINGTON-DALE
(WP407-2)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	8	100.00	800
Detector	EA	2	70.00	140
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,800.00	<u>1,800</u>
				4,050
Contingencies, Unit Cost Increase, Engineering - 21%				<u>851</u>
				4,901

USE \$4,900

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

CODE NO. R-224(9)

WASHINGTON-MARCELLA

(WP407-3)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Pedestrian Signal	EA	8	100.00	800
Detector	EA	1	70.00	70
Relay	EA	1	110.00	110
Controller	EA	1	1,200.00	1,200
Installation	LS	1	1,800.00	<u>1,800</u>
				3,980
Contingencies, Unit Cost Increase, Engineering - 21%				<u>836</u>
				4,816

USE \$4,800

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(9)

EXHIBIT "B" - TRAFFIC SIGNAL SYSTEM COST BY INTERSECTION

WASHINGTON-ROAD "A"BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Post - New	EA	10	120.00	1,200
Housing	EA	14	75.00	1,050
Conduit and Excavation	LF	600	10.00	6,000
Cable	LF	750	0.80	600
Pedestrian Signal	EA	12	100.00	1,200
Controller	EA	1	1,200.00	1,200
Installation	LS	1	4,000.00	<u>4,000</u>
				15,250
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,203</u>
				18,453

USE \$18,500

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT:	REMOVAL AND BACKFILL OF STREETS	CODE NO. R-224(10)
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Reference is made to the following drawings, which accompany this report:

Streets WP401 - 1 thru 7

It is estimated that pavement excavation and backfill will average approximately 9 inches. This will vary with the particular street and the parcels traversed by these abandoned streets. Some of the borrow will be used for filling abandoned manholes, catch basins, and other utility manholes and boxes.

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "A" - REMOVAL AND BACKFILL OF STREETS

CODE NO. R-224(10)

	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Miscellaneous Streets & Sidewalks	<u>93,500</u>	100	<u>93,500</u>
GRAND TOTAL	93,500		93,500

APPLICATION FOR LOAN AND GRANT
PART I: FINAL REPORT PROJECT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - REMOVAL AND BACKFILL OF STREETS

CODE NO. R-224(10)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Removal and Backfill of Streets	SY	53,260	1.45	77,227
Contingencies, Unit Cost Increase, Engineering - 21%				<u>16,218</u>
				93,445

USE \$93,500

APPLICATION FOR LOAN AND GRANT
PART I: FINAL REPORT PROJECT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT CODE NO. R-224(10)
EXHIBIT "C" - UNIT COST FOR REMOVAL AND BACKFILL OF STREETS

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER SY</u>	<u>UNIT COST</u>	<u>TOTAL PER SY</u>
Pavement Excavation	CY	0.28	3.00	0.84
Ordinary Borrow	CY	0.28	1.75	0.49
Grading	SY	1	0.10	<u>0.10</u>
				1.43

USE \$1.45

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT: ROUGH GRADING

CODE NO. R-224 (11)

Reference is made to the following drawing, which accompanies this report:

Proposed Land Use Plan - Map 2 of Exhibit "B".

The Washington Park Area has considerable out cropping of ledge, which in order to make parcels acceptable to redevelopers must be removed and the parcel rough graded.

Unit prices for rock and earth excavation was carefully checked against unit prices of recent contracts for similiar work awarded by the Public Works Department, City of Boston and the Public Works Department, Commonwealth of Massachusetts. Quantities used were estimated from topographic maps of the Washington Park Area and proposed grades which would be acceptable to the redevelopers.

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "A" - ROUGH GRADING BY PARCELS

CODE NO. R-224 (11)

	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Parcel B-3	30,500	100	30,500
Parcel C-1	93,450	100	93,450
Parcel C-3	47,800	100	47,800
Parcel H-6	6,300	100	6,300
Parcel I-2	56,000	100	56,000
Parcel I-5	18,450	100	18,450
Parcel C-2	4,200	100	4,200
Parcel F-1	12,400	100	12,400
Parcel I-1	2,350	100	2,350
Parcel G-1	2,900	100	2,900
Parcel F-1	12,400	100	12,400
Parcel H-1	2,300	100	2,300
Parcel C-5a	3,100	100	3,100
Parcel I-3	3,650	100	3,650
Parcel F-3	2,950	100	2,950
Parcel B-1	5,350	100	5,350

	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Parcel B-2	5,700	100	5,700
Parcel I-6	3,700	100	3,700
Parcel H-9	2,850	100	2,850
Parcel C-5b	7,050	100	7,050
Parcel J-6	5,900	100	5,900
Parcel J-3b	<u>4,300</u>	100	<u>4,300</u>
GRAND TOTAL	333,600		333,600

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
PROJECT NO. MASS. R-24

WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - ROUGH GRADING ON PARCELS

CODE NO. R-224 (11)

PARCEL B-3

Washington Street between Townsend and Cobden (See Proposed Land Use Plan)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	6,100	3.00	18,300
Earth Excavation & Rough Grading	CY	9,200	0.75	<u>6,900</u>
				25,200
Contingencies, Unit Cost Increase, Engineering - 21%				<u>5,292</u>
				30,492
				<u>USE \$30,500</u>

PARCEL C-1

Bounded by Walnut, Walnut Avenue, Rockland, Sherman and Dale.

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	15,350	3.00	46,050
Earth Excavation & Rough Grading	CY	41,570	0.75	<u>31,178</u> 77,228
Contingencies, Unit Cost Increase, Engineering - 21%				<u>8,300</u> 93,446
<u>USE \$98,450</u>				

PARCEL C-3

Corner of Road "A" and Humboldt to Parcel H-6

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	6,600	3.00	19,800
Earth Excavation & Rough Grading	CY	26,300	0.75	<u>19,725</u> 39,525
Contingencies, Unit Cost Increase, Engineering - 21%				<u>8,300</u> 47,825
<u>USE \$47,800</u>				

PARCEL H-6

Corner of Road "A" and Warren to Parcel C-3

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	850	3.00	2,550
Earth Excavation & Rough Grading	CY	3,520	0.75	<u>2,640</u> 5,190
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,090</u> 6,280
<u>USE \$6,300</u>				

PARCEL I-2

Circuit from Warren to Regent

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	8,050	1.40	24,150
Earth Excavation & Rough Grading	CY	29,510	0.75	<u>22,133</u> 46,283
Contingencies, Unit Cost Increase, Engineering - 21%				<u>9,719</u> 56,002

USE \$56,000

PARCEL I-5

Humboldt Avenue between Waumbeck and Harrishof

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	3,240	1.00	9,720
Earth Excavation & Rough Grading	CY	7,360	0.75	<u>5,520</u> 15,240
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,200</u> 18,440

USE \$18,450

PARCEL C-2

Corner of Humboldt Avenue and Road "A" to Parcel F-1

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
General Grading	CY	3,450	1.00	3,450
Contingencies, Unit Cost Increase, Engineering - 21%				<u>725</u> 4,175

USE \$4,200

PARCEL F-1

Warren from Road "A" to Dale

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	2,175	3.00	6,525
Earth Excavation & Rough Grading	CY	4,940	0.75	<u>3,705</u> 10,230
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,148</u> 12,378

USE \$12,400

PARCEL I-1

Corner of Dudley and Warren

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	350	3.00	1,050
Earth Excavation & Rough Grading	CY	1,170	0.75	<u>878</u> 1,928
Contingencies, Unit Cost Increase, Engineering - 21%				<u>405</u> 2,333

USE \$2,350

PARCEL G-1

Washington to Dudley

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	175	4.00	700
Earth Excavation & Rough Grading	CY	2,250	0.75	<u>1,688</u> 2,388
Contingencies, Unit Cost Increase, Engineering - 21%				<u>501</u> 2,889

USE \$2,900

Boston R-24/R-224 (11)

Exhibit "B"

4 of 8

PARCEL H-1

Warren between Parcels I-1 and H-3

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	180	4.00	720
Earth Excavation & Rough Grading	CY	1,590	0.75	<u>1,193</u> 1,913
Contingencies, Unit Cost Increase, Engineering - 21%				<u>402</u> 2,315

USE \$2,300

PARCEL C-5a

Washington from Dale to Circuit

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
General Grading	CY	2,570	1.00	2,570
Contingencies, Unit Cost Increase, Engineering - 21%				<u>540</u> 3,110

USE \$3,100

PARCEL I-3

Washington from Road "A" to Dale

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	260	4.00	1,040
Earth Excavation & Rough Grading	CY	2,640	0.75	<u>1,980</u> 3,020
Contingencies, Unit Cost Increase, Engineering - 21%				<u>634</u> 3,654

USE \$3,650

PARCEL F-3

Washington from Townsend to Road "A"

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
General Grading	CY	2,430	1.00	2,430
Contingencies, Unit Cost Increase, Engineering - 21%				<u>510</u> 2,940

USE \$2,950

PARCEL B-1

Corner of Humboldt Avenue and Townsend

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	740	3.00	2,220
Earth Excavation & Rough Grading	CY	2,930	0.75	<u>2,198</u> 4,418
Contingencies, Unit Cost Increase, Engineering - 21%				<u>928</u> 5,346

USE \$5,350

PARCEL B-2

Corner of Warren and Circuit

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	650	3.00	1,950
Earth Excavation & Rough Grading	CY	3,670	0.75	<u>2,753</u> 4,703
Contingencies, Unit Cost Increase, Engineering - 21%				<u>988</u> 5,691

USE \$5,700

PARCEL I-6

Seaver between Walnut Avenue and Park View

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	250	4.00	1,000
Earth Excavation & Rough Grading	CY	2,740	0.75	<u>2,055</u> 3,055
Contingencies, Unit Cost Increase, Engineering - 21%				<u>642</u> 3,697

USE \$3,700

PARCEL H-9

Corner of Humboldt and Deckard

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Earth Excavation & Rough Grading	CY	3,140		2,355
Contingencies, Unit Cost Increase, Engineering - 21%				<u>495</u> 2,850

USE \$2,850

PARCEL C-5b

Circuit at Washington

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	1,125	3.00	3,375
Earth Excavation	CY	3,240	0.75	<u>2,430</u> 5,805
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,219</u> 7,024

USE \$7,050

PARCEL J-6

Walnut Avenue between Abbottsford and Crawford

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	840	3.00	2,520
Earth Excavation & Rough Grading	CY	3,120	0.75	<u>2,370</u> 4,890
Contingencies, Unit Cost Increase, Engineering - 21%				<u>1,027</u> 5,917

USE \$5,900

PARCEL C-4

Corner of Road "A" and Humboldt

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Earth Excavation & Rough Grading	CY	2,330	0.75	1,748
Contingencies, Unit Cost Increase, Engineering - 21%				<u>367</u> 2,115

USE \$2,100

PARCEL J-3B

Road "A" Between Washington and Humboldt

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Rock Excavation	CY	510	3.00	1,530
Earth Excavation & Rough Grading	CY	2,720	0.75	<u>2,040</u> 3,570
Contingencies, Unit Cost Increase, Engineering - 21%				<u>750</u> 4,320

USE \$4,300

APPLICATION FOR LOAN AND GRANT
PART I: FINAL PROJECT REPORT
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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENTS REPORT:	STREET, TRAFFIC AND DIRECTIONAL SIGNS	CODE NO. R-224 (12)
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The Traffic Division, Boston Public Works Department has prepared estimates on the cost of street, traffic and directional signs for Washington Park. Exhibit "B" lists boundary and interior intersections, and the estimated cost of adequate signs. It is contemplated that intersection signs (street name) will be designed by the Traffic Division or the architectural consultants to conform with the overall architectural planning of Washington Park.

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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "A"- STREET, TRAFFIC AND DIRECTIONAL SIGNS

CODE NO. R-224(12)

<u>INTERIOR STREETS</u>	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Miscellaneous Streets ("B"-1)	<u>63,600</u>	100	<u>63,600</u>
SUBTOTAL	63,600		63,600
 <u>BOUNDARY STREETS</u>			
Miscellaneous Streets ("B"-2)	<u>25,900</u>	50	<u>12,950</u>
SUBTOTAL	25,900		12,950
GRAND TOTAL	89,500		76,550

APPLICATION FOR LOAN AND GRANT
PART I: FINAL REPORT PROJECT
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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT CODE NO. 224(12)
EXHIBIT "B" - STREET, TRAFFIC & DIRECTIONAL SIGNS

INTERIOR

Street Name Signs	5,535
Street Name Signs - Replaced	1,075
Traffic and Directional Signs	<u>45,964</u>
	52,574
Contingencies, Unit Cost Increase, Engineering -21%	<u>11,041</u>
	63,615

USE \$63,600

PROJECT IMPROVEMENT REPORT CODE NO. 224(12)
EXHIBIT "B" - STREET, TRAFFIC & DIRECTIONAL SIGNS

BOUNDARY

Street Name Signs	1,910
Street Name Signs - Replaced	375
Traffic & Directional Signs	<u>19,133</u>
	21,418
Contingencies, Unit Cost Increase, Engineering - 21%	<u>4,498</u>
	25,916
	<u>USE \$25,900</u>

APPLICATION FOR LOAN AND GRANT
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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT: MTA FACILITIES

CODE NO. R-224 (13)

Reference is made to the following drawings, which accompany this report:

MTA FACILITIES - WP408-1 thru 8

The MTA Facilities in the area were found to be generally adequate. Future modification or changes in these facilities may be made to improve the service or keep pace with changing transportation modes.

Certain underground electrical conduits and cables must be relocated in accordance with the Redevelopment Plan.

The underground system is in accordance with standards established by the Metropolitan Transit Authority.

APPLICATION FOR LOAN AND GRANT
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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "A" - MTA FACILITIES

CODE NO. R-224(13)

<u>INTERIOR STREETS</u>	<u>Total Cost</u>	<u>%</u>	<u>Charge To Project</u>
Road "A" ("B"-1)	59,300	100	59,300
Humboldt ("B"-2)	50,300	100	50,300
Walnut Avenue ("B"-3 thru 5)	<u>25,300</u>	100	<u>25,300</u>
SUBTOTAL	134,900		134,900
<u>BOUNDARY STREETS</u>			
Warren ("B"-6)	<u>16,200</u>	50	<u>8,100</u>
SUBTOTAL	16,200		8,100
GRAND TOTAL	151,100		143,000

APPLICATION FOR LOAN AND GRANT
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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT CODE NO. R-224(13)
EXHIBIT "B" - M.T.A. FACILITIES - COSTS BY STREETS

ROAD A

From Walnut to Humboldt (WP408-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Conduit and Cable - In Place	LF	650	68.00	44,200
Manhole	EA	2	1,500.00	3,000
Rock Excavation	CY	150	12.00	<u>1,800</u>
				49,000
Contingencies, Unit Cost Increase, Engineering - 21%				<u>10,300</u>
				59,300

USE \$59,300

PROJECT IMPROVEMENT REPORT
EXHIBIT "B" - M.T.A. FACILITIES - COSTS BY STREETS

CODE NO. R-224(13)

HUMBOLDT AVENUE

From Road A to Walnut (WP408-4)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Conduit and Cable - In Place	LF	550	68.00	37,400
Manhole	EA	2	1,500.00	3,000
Rock Excavation	CY	100	12.00	<u>1,200</u>
				41,600
Contingencies, Unit Cost Increase, Engineering - 21%				<u>8,740</u>
				50,340

USE \$50,300

CODE NO. R-224(13)

WALNUT AVENUE

INTERIOR

Boston R-24/R-224(13) Exhibit "B"

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(13)

EXHIBIT "B" - M.T.A. FACILITIES - COSTS BY STREETS

WALNUT AVENUE (Relocated)

From Circuit to Warren (WP408-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Conduit and Cable - In Place	LF	240	68.00	16,320
Manhole	EA	1	1,500.00	1,500
Rock Excavation	CY	50	12.00	<u>600</u>
				18,420
Contingencies, Unit Cost Increase, Engineering - 21%				<u>3,870</u>
				22,290

USE \$22,300

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(13)

EXHIBIT "B" - M.T.A. FACILITIES - COSTS BY STREETS

WALNUT AVENUE (Abandoned)

From Circuit to Warren(WP408-2)

INTERIOR

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Remove Abandoned Cable	LS	-	-	500
Contingencies, Unit Cost Increase, Engineering - 21%				<u>100</u>
				600

USE \$600

PROJECT IMPROVEMENT REPORT

CODE NO. R-224(13)

EXHIBIT "B" - M.T.A. FACILITIES - COSTS BY STREETS

WARREN STREET

From Walnut Relocated to Walnut Abandoned (WP408-2)

BOUNDARY

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL</u>
Conduit and Cable - In Place	LF	170	68.00	11,560
Manhole	EA	1	1,500.00	1,500
Rock Excavation	CY	30	12.00	<u>360</u>
				13,360
Contingencies, Unit Cost Increase, Engineering - 21%				<u>2,800</u>
				16,160

USE \$16,200

APPLICATION FOR LOAN AND GRANT
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WASHINGTON PARK PROJECT
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASSACHUSETTS

PROJECT IMPROVEMENT REPORT
EXHIBIT "C" - M.T.A. FACILITIES - UNIT COSTS

CODE NO. R-224(13)

CONDUIT AND CABLE - IN PLACE

<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY PER LF</u>	<u>UNIT COST</u>	<u>TOTAL</u>
4" Fibre Conduit	LF	6.0	1.50	9.00
Pull Wire	LF	6.0	.10	.60
Concrete	CY	0.1	60.00	6.00
Trench Excavation & Backfill	CY	0.3	3.00	.90
Cable-3 Conductor #4/0 AC 15,000 Volt Paper-Lead Cable	LF	4	10.00	40.00
Cable-1 Million Circular Mil, Lead Covered, Rubber or Neoprene Insulated	LF	2	5.50	<u>11.00</u>
				67.50

USE \$68.00 PER LF

